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Report of the Conservator of forests for the official year 1871-72 Madras,

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OFFICE OF CONSERVATOR OF FORESTS,
OOTACAMUND, 10*th June* 1872.

From

MAJOR R. H. BEDDOME,
Conservator of Forests,

To

THE HONOURABLE W. HUDLESTON,
Secretary to Government, Revenue Department,

SIR,—I have the honour to forward the annual report of my department for the year 1871-72.

2. I will proceed to treat upon the administration under the following Sections:—

SECTION I.—Inspection-tours of the Conservator.
SECTION II.—Reserves.
A.—Reserved forests and contemplated operations.
B.—Fuel-reserves and contemplated operations.
C.—Plantations and contemplated operations.
SECTION III.—License and Voucher-forests.
SECTION IV.—Yield of forests.
SECTION V.—Financial results.
SECTION VI.—General remarks.

SECTION I.—INSPECTION-TOURS OF THE CONSERVATOR.

(1.) In the month of June the Conservator inspected the Central Office at Madras and made a tour through the forests of South Arcot, visiting the different reserves near Gingee and Chengum, and consulting with the Collector at Cuddalore.

(2.) In the month of July he visited the plantations and fuel-reserves, depôts, and office establishment, and some of the forest-tracts in the Salem Range, and the plantations, fuel-reserves, depôts, and office establishments in the Bellary, Cuddapah, and North Arcot Districts.

(3.) In August he proceeded on an inspection-tour in South Timevelly, and meeting the range officer in the Mutikulivayal, he explored that little known tract and the forests* in its vicinity; thence he proceeded to the Trickingoody forests, and inspected operations, depôts, establishments, etc., in the Calcad forests and all along the ghauts as far as Courtallum. He then proceeded to Palamcottah for consultation with the Collector, and visited the lately organized railway fuel-reserves in the vicinity of that town; thence, in September, he proceeded westward

* Separate report forwarded and printed in Government Order, 29th September 1871, No. 1,702.

through the little known forest-tracts due west of Courtallum, eventually reaching Colatoorpallay in Travancore. These forest-tracts are about the richest in the Presidency, and botanically abound with novelties. Much botanical material and a good many new trees and plants were collected, but incessant rain and a very limited time necessitated the exploration being a very superficial one. From Colatoorpallay he proceeded *via* Cottyam to Peermede, and visited the Travancore Cinchona plantation in that neighbourhood, and then the forest-tracts between the Perryar and the ridges over the Cumbum valley, which latter it is very desirable that the Madras Government should, if possible, lease from the Travancore Sirkar, as they cannot be worked to the westward. All the above forests may be said to be quite unexplored botanically, and those about Peermede and the ghaut leading up to it from the Cottyam side are very rich in novelties, and several most interesting new trees, etc., were collected.

(4.) From the Perryar the Conservator proceeded into the Cumbum valley and, with the forest officer of the Madura district, he inspected the plantations, depôts, and establishments in that valley, and the plantations and forests on the Pulney Hills, and the plantation, forests, and establishments in the Pulney Taluq north of the range; thence he proceeded to Polachy for a conference on forest-matters with the officer in charge of the Anamallay Range.

(5.) In October he proceeded with the officer in charge of the Mudumallay and Wynaad Ranges on an inspection-tour of the forests, depôts, plantations, and establishments in the Seegoor, Mudumallay, and Wynaad Ranges; and in November he passed on from the Wynaad through Coorg, and descended the slopes below Munjeerabad, where he was met by the officer in charge of the South Canara Range; and he inspected the forests and operations, depôts, etc., in the southern part of that range and the Teak plantations at Parapa, and, returning by sea from Mangalore, inspected the coast-depôts at Calicut.

(6.) In December, accompanied by the officer in charge of the Anamallay and Bolamputty Ranges, he made a tour of inspection and exploration in the Bolamputty and Sholaykarray Ranges, and explored the forests on the high range of hills north of Palghaut and lying between that town and Coimbatore, the top of which proved to be 6,800 feet elevation. The forests towards the further end of the beautiful little valley known as the Upper Bolamputty valley and all up the northern slopes of the ridge between that valley and Palghaut in the vicinity of the Mutikolum (a natural rocky tank just over a fine water-fall) are very dense and rich, and have been but seldom penetrated by Europeans; they also swarm with game, Elephants, Bison, and Sambre, besides herds of Ibex on the grassy ridges.

(7.) In January the Conservator was in attendance at the Central Office at Madras during the early part of the month, and he subsequently went a tour through all the railway fuel-reserves in Bellary, Cuddapah, North Arcot, and Salem; inspecting also the different establishments and visiting some of the Cuddapah hill-forests (the range between Codoor and Rachotee).

(8.) In February he visited the newly commenced irrigated plantations at Ellamanore near Trichinopoly and the tracts selected for railway fuel-plantations in that vicinity; he then ascended the Kollaymallays, a range of hills in the

Salem Range, and inspected the forests and Sandal-wood tracts of that range; thence, together with the forest officer of the Salem Range and the Head Assistant Collector, he visited the Yellagherry Hills near Tripatore, and inspected the forests and Sandal-wood tracts and the Teak-reserve on those hills; after which he proceeded to Denkinacottah, and inspected the establishment and depôt, etc., in that range.

(9.) In March he inspected all the Teak-forests of the Anamallays and the different depôts, etc., and, in company with the forest officer of the range, he went on exploration-tour from Tekady over the Coombalam Kovy, a mountain 5,000 feet high, to that portion of the Anamallays known as the Nelliampady Hills, and thence on to Padagiri, a high mountain at the extreme north of the range, and eventually down the northern slopes to Palghaut. All this northern portion of the Anamallays is exceedingly rich in its forests, and some portions have scarcely ever been visited by Europeans. Much of interest botanically was collected; the grassy spots between the forests on the Padagiri swarmed with game, though the country was excessively parched owing to a most unusually dry season, and the water was stagnant in most of the rivers.

(10.) A fortnight after descending the Yellagherries in February the Conservator was attacked with jungle-fever which recurred in three subsequent attacks, each with increased severity, at intervals of a fortnight, and latterly the poison has so affected his system that he is ordered off to sea just as this report is due, and the review of the various operations of the year and the tabular statements, etc., will devolve upon Lieutenant-Colonel Morgan. The report would, in ordinary cases, have been ready before this, but Government having reviewed the last year's report so late, and having ordered so many alterations in the form of the range reports, etc., the range officers have all had to re-write their reports, and some of them have only just been received, and others have not yet come to hand, so that it has been impossible for the Conservator to draw up his report as early as usual.

SECTION II.—Reserves.

A.—Reserved Forests.

3. Gumsore and Surada. *Reserves.*—These forests seem to have been carefully conserved by Mr. MacCally. Certain reserves have been marked off, but encroachments by ryots are much complained of.

4. North Arcot. *Reserved Forests.*—Under this head a commencement has been made to do away with licenses by felling departmentally, and only granting licenses for unreserved timbers. At first a loss of revenue is, of course, experienced, but in course of time this will be amply recouped. The reserved forests were much destroyed by every thing that would pass muster for a sleeper being cut out. I have a perfect recollection of the thousands of immature sleepers cut in 1860 and 1861, which actually rotted before they could be used as sleepers.

5. Salem. *Reserved Forests.*—In Salem there is but little reserved forest, Denkinacottah has excellent Sandal-wood, and below the plateau, extending to the Cauvery, good Acha-wood is plentiful.

6. *Contemplated Operations.*—To fell Acha-wood if a road is made and to commence a Sandal-wood plantation. An intelligent Overseer, Mahomed Ali, has been sent to the Collegal plantations to learn the system of planting pursued there. It will be very necessary that a good site be selected. Instructions will be sent to the Assistant Conservator for his guidance.

7. South Arcot. *Reserved Forests.*—Strictly speaking there is no reserved forest at present. First and second-class timbers are not given on license, but felled departmentally.

8. Madura. *Reserved Forests.*—The reserved forests at Periacolum and Pulney are worked departmentally. Lieutenant Williams complains of the difficulty he experiences in checking smuggling due to the great length of boundary touching on foreign States.

(i.)—The advantages of fencing are dwelt upon; if fire does not consume the fence no doubt the advantages are commensurate with the expenditure incurred, especially as a live-fence can be formed within the dead-fence.

(ii.)—The bad effect caused by the burning of forests is forcibly described by Lieutenant Williams, and I can fully endorse all that he writes. The Board of Revenue, I observe in their Proceedings of the 5th August 1871, No. 3,284 are under the impression that "fires do no harm quite the contrary." Of course, fires have their advantages. They render the jungle less pestiferous, and the young grass comes up earlier; but fires ruin saplings, and should never be allowed in a reserved forest, but the difficulty is to prevent them. Formerly, before the Forest Department was organized, there were three special causes which threatened to ruin all forests, viz., the pernicious practice indulged in by the people of cutting saplings instead of full grown trees; this has now been done away with, but fires and cattle remain to desolate the forests.

9. Tinnevelly. *Reserved Forests.*—Some 10,000 cubic feet of timber were felled and brought to depôt at a cost of Rupees 10,928, or more than a Rupee a cubic foot; this, as the Assistant remarks, is a very high rate, but it was due partly to want of experience and partly to want of good roads. As Vengay in Madura realizes Rupees 1-8-0 the cubic foot, whilst in Mysore good Teak fetches but Rupees 1-1-0 per cubic foot; the expenditure is fairly covered by the price realized.

10. Singamputty Estate Forests. *Reserved Forests.*—The proceeds realized are favourable as compared with the outlay; but the wood in depôt has clearly been valued too high. The new rules for valuation of timber will save this alteration of value of stock on hand, and prevent confusion.

11. Anamallay. *Reserved Forests.*—These have been carefully worked by Mr. Douglas, as may be judged by his report. The carting by Government bullocks, as explained by Mr. Douglas, was rather a failure, due to the gross neglect of the Overseer. It may safely be laid down, as a rule, that Government bullocks or elephants should never be sent to a distance from the forest. On this occasion the carts went to Mungarah some marches from the forest, all control over them was lost, hence the loss. When distances have to be traversed it is better to employ contractor's carts.

12. *Contemplated Operations.*—Planting and systematic conservancy.

13. BOLAMPUTTY. *Reserved Forests.*—Have not been worked.

14. *Contemplated Operations.*—To collect a small quantity of ripe Teak in depôt for sale.

15. MUDUMALLAY. *Reserved Forests.*—But little wood has been felled; the great object has been to bring in all outlying timber and cart to Mysore and Ootacamund.

16. *Contemplated Operations.*—Felling will not be recommenced until the present stock has been got rid of, or very much reduced.

17. WYNAAD. *Reserved Forests.*—These have been worked departmentally during the past year. It has been proposed to open a depôt at Tellicherry for Teak brought from the Kudrikote forest down the Peria Pass. Contracts for carriage at a fair rate have lately been made.

It is very advisable that the wood in this forest be kept for sending to the coast. The Sidilett and Korcheat forests supply Mysore with timber. The boundaries of all these forests are in an uncertain state; stones laid down by Lieutenant Fullerton have been removed, and until proper boundaries are made, such as a pick-axed trench with mounds at intervals and large trees in the vicinity blazed, uncertainty must prevail.

The roads of these forests are not in a satisfactory state and Mr. Peet will be called upon to submit a plan or estimate for removing timber out of the forests cheaply and expeditiously, as per G. O. No. 609, 16th April 1872, paragraph 17.

18. SOUTH CANARA. *Reserved Forests.*—Floating timber down the Pooswany river is difficult; it is highly advisable to make use of water-carriage wherever possible. A good supply of seasoned timber is to be kept on hand; this is very necessary.

B.—Fuel-reserves.

19. CUDDAPAH. *Reserves, Fuel.*—These consist of four. Balapilly, a valuable one, through which the railway passes. Mr. Yarde complains that Plot No. 2 has not been made over to him by the Collector, though a cheque for the transfer of the land was made out. No time should be lost in securing this land for a reserve.

The same remarks apply to the Yerrapulla and Gallcalla reserves. The Assistant forcibly points out that the jungles are day by day receding, and that fuel-reserves are urgently demanded; he also points out that fuel-plantations will never pay by the sale of fuel, that we must look to reserves to do this, but that plantations may have other uses in dry countries such as Cuddapah and Bellary. This is sound reasoning, but so long as the Revenue Board indicate to the railway that it must not depend upon the country for fuel, so long will Collectors adopt an apathetic policy as regards fuel-reserves. It seems that the orders of Government* regarding land suitable for fuel-reserves in the vicinity of railways have been over-looked as regards the reserves mentioned above.

Vide G. O. No. 1,298, dated 19th August 1870.

20. NORTH ARCOT. *Fuel-reserves.*—One fuel-reserve of four square miles has been nearly enclosed; another of six square miles at Amboor has been at the last moment withheld; it is very necessary that this reserve should be made over as

early as possible, as Mr. Sheffield reports that there is not another eligible site to be obtained elsewhere.

21. SALEM. *Fuel-reserves.*—These are considerable, and could two or three favourable seasons be secured, no doubt the attempt at broad-cast planting would be successful. Many failures may occur, but the system should be persevered in. Some of the reserves are too far from the railway, such as D and E, eleven miles from the Jollarapett line, Singorepett twelve miles. Firewood cannot be conveyed more than ten miles by road. These reserves, however, will be useful for the people.

22. *Contemplated Operations.*—To protect the reserves by fencing, this of course is the first step. It remains to be seen what the results of keeping cattle, fire, and people out will be. One thing is certain that wherever the above system has been tried extensively a strong natural growth has sprung up; for instance, the Shikarghas of the Scinde Ameers, men who like William the Conqueror depopulated whole tracts to form forest hunting-grounds. In Scinde and in England they had better soil to deal with than the strong arid wastes of Salem. Nevertheless, I am inclined to think that careful conservation, supplemented by broad-cast planting where necessary, will in course of time produce a marked effect. Mr. Brougham has sent an excellent skeleton map explaining the sites of the different reserves.

23. SOUTH ARCOT.—Some progress has been made at Mothenai. Goats are to be excluded, and some attempts at fencing made. Nurseries will be formed, and open patches planted up. Extent of reserve about 4,800 acres.

At the Chinnasamudrum reserve fencing was commenced and not finished, but it is in contemplation to finish the fencing; not to do so would be simply to waste the Rupees 635 already laid out. As it was, goats eat down many of the young plants put out. I may here mention that on goats being introduced to the Island of St. Helena, the natural Ebony jungle threatened to disappear altogether; the goats were then killed off, and in course of time the jungle grew up again. For real mischief to young trees no animal surpasses the goat in execution. The remaining two reserves have not yet been fenced, but the sooner they are fenced from goats and cattle, the better it will be for the trees.

24. TINNEVELLY. *Fuel-reserves.*—These are partly incorporated with the plantations; the sites first chosen having been abandoned, tank-beds have been resorted to.

25. TRICHINOPOLY. *Fuel-reserves.*—In addition to the padugay-lands certain tracts in the vicinity of the railway have been marked off as fuel-reserves; these, no doubt, will be useful.

26. BOLAMPUTTY. *Fuel-reserves.*—The Waliar reserve is being planted up; cattle, coolies, and fires have been kept out. Mr. Douglas writes that the good effect of excluding them is already apparent. Poonga Murrum (*Pongamia glabra*) should not be planted, as the railway refuses to take the wood for fuel.

27. *Contemplated Operations.*—It is proposed to extend these reserves, as there is Government land in their vicinity. Mr. MacGregor, the Collector, is making inquiries on the subject.

28. Bowani Range. *Fuel-reserves.*—In Mettapollium these are being fenced.

29. *Contemplated Operations.*—To finish the fencing of all reserves as early as possible.

30. Bowani. *Fuel-reserves.*—These are not yet fenced; it will be necessary to fence them in this year.

C.—Plantations.

31. Gumsore and Surada. *Plantation.*—There is a small experimental plantation useful if it only teaches the Overseer how to plant.

32. Kurnool. *Plantations.*—These seem to be thriving. The *Soymida febrifuga*, a valuable red cedar, takes to the soil kindly, and might be propagated largely.

33. *Contemplated Operations.*—The departmental felling has been limited; the floating was a failure, as bamboos were not used.

34. Cuddapah and Bellary. *Plantations and contemplated Operations.*—These consist of five railway fuel-plantations, and one of the valuable wood, Red Sanders. The fuel-plantations generally are doing fairly. For the first three or four years the work of establishing plants in so dry a district is very difficult and expensive, but though the plantation may never pay by the sale of its fuel still the surrounding country will benefit, as trees surely beget moisture. The Forest Department will thus indirectly benefit the ryot. The formation of plantations has become a very heavy item in forest expenditure, but were the whole forest-revenue expended in plantations and conservation, Government would, in the course of years, be a large gainer. What has already happened in Algeria threatens to occur here, unless speedy measures are taken to secure reserves, and save what yet remains of existing forests. Fires and cattle are worse even than ryots, and should be excluded; perhaps when Collectors are Conservators they will be able to use their authority to more effect than the Forest Department has been able to do. I quite agree with the Revenue Board that there is enough for all, if it is properly conserved, but that is the difficulty. In vain does the Forest Department try to save the ryots from themselves; their improvident habits too surely destroy the jungles which ought to last them for centuries.

35. North Arcot. *Plantations.*—The Casuarina plantations, as far as growth and cost are concerned, appear a success; but 350 trees per acre is too few a number; when cut out the ground can be re-planted. It is a question if 600 trees to the acre would not have paid better. Mr. Sheffield furnishes very good tabulated statements of his plantations. Ten feet a year seems a marvellous growth for so hard a wood; the girth is a fair proportion to the height, but it should have been taken at 6 feet from the ground, not 1 foot. There are in the plantations 143,500 established plants. Some of the 1866 trees average about 14 cubic feet each, which, at 80 lbs. the cubic foot, would equal 1,120 lbs., or half a ton. It will probably be found that the tree will be too valuable for railway fuel, and will sell better for building timber.

The whole cost of the plantations, including fencing, etc., is but Rupees 13,872-14-4.

36. SALEM. *Plantations.*—These have not been very successful; sufficient money for watering purposes has not been expended. It is of little avail planting trees in dry situations, unless they are watered during the hot season for the first year. The Shevaroy plantation is rather distant from the railway; it has cost but little, and is not to be extended, but simply kept as an experimental ground.

37. *Contemplated Operations.*—To bring more land under the plough for broadcast sowing, but unless the land lies low, watering will be necessary.

38. SOUTH ARCOT. *Plantation.*—At Chengum thirteen acres are to be planted with Casuarina. The timber-yard at Trinomallay is also to be planted, a very necessary precaution in so hot a place.

39. MADURA. *Plantations.*—Some progress has been made with plantations in Madura. The preliminary expenses are always heavy, such as formation of nurseries, fencing, digging wells, etc. The growth of the Teak-trees in No. 1 plantation is fair. In No. 2 the Eucalypti have not grown so well as the Acacias. In No. 3 the trees have made extraordinary growth; more than a foot a month or 8 feet in seven months. It would no doubt be advisable to extend this plantation.

40. TRICHINOPOLY AND TANJORE. *Plantations.*—The preliminary expenses for planting have been heavy, amounting to Rupees 6,300, but the money will be well spent, as these lands running parallel with the railway, and at a distance of from one to three miles, afford great facilities for the supply of fuel to the railway. The lands are at present covered with scrub-jungle and some large trees; many unfortunately quite useless for railway fuel; nevertheless these must be cut out to afford room for trees more suitable for fuel. The land is good; water is near the surface, and planting should now be carried on at a less cost.

41. The Tanjore fuel-plantation has been a failure; probably the site selected for a nursery abounded in salt-earth. Lieutenant Williams will make further experiments.

42. TINNEVELLY. *Plantations.*—That little has been done, and that at rather a heavy cost; two plantations containing 4,200 pits and about two acres cleared for Rupees 422-13-0 is a rate of expenditure that forbids planting, and cannot be persevered in, unless the rates are greatly reduced; Rupees 200 an acre where plants do not grow well against Rupees 30 an acre in Nellumboro is a startling difference.

The Cinchona seems to thrive, but is much drawn up; seven inches in circumference for 20 feet in height is far too little for girth; the girth should be at least twelve inches for that height.

43. The planting of tank-beds for railway fuel will no doubt be a success, especially if the plantations are fenced.

44. The planting of Cardamoms though rather opposed to forest conservancy proper will no doubt be a success financially, and, as Mr. Hayne observes, if carefully carried out may not interfere with the rainfall or forestry.

45. ANAMALLAY. *Plantations.*—These were not so successful as they might have been owing to the attack of a grub which destroyed the roots of the young seedlings; the same thing happened in Mudumallay about four years ago; the only cure is to deluge the seed-beds with water as is done at Nellumbore; there the seed-beds

are not only raised six inches from the ground, but a wall three inches high runs round the bed to retain all water; thus insects, grubs, etc., are completely drowned.

46. The planting on the Anamallays can now be cheaply carried on, as labour is only four Annas a day, the same as at Nellumbore. Twelve years ago when I advised against planting on the Anamallays, labour on account of the railway could not be obtained under 8 Annas a day, and was scarce even at that rate. Circumstances being changed, it is very advisable that certain conservancy operations, such as clearing round young Teak-plants to keep off the annual fires, cutting out bamboo clumps, and planting them with Teak, and pruning young saplings, should be taken in hand. Mr. Douglas having lately visited the Conolly Teak plantations will now perceive how much more certain the plan of planting seedlings in pits is than that of sowing seeds.

47. The second suggestion may be tried, especially when there is not much natural Teak. It does not follow because no natural Teak grows in a certain spot, that Teak will not grow there; it is probably accidental. The Teak being gregarious is due to the fact of the seed being very heavy; neither birds nor wind carry it away; the squirrel alone eats it; hence it does not travel far: given a deep soft sub-soil with tolerable shelter, the Teak is sure to grow. I cannot altogether agree with Mr. Brown that soils cannot be exhausted by the growth of one particular kind of tree; if so, planted Teak would find plenty of natural food along side of wild Teak; but this is not the case, in fact: for we find the planted Teak stunted, showing that the nourishment peculiar to Teak trees has been or is already absorbed by the wild Teak, but plant a Teak sapling along side of a Black-wood tree and it flourishes, showing that the food required by the two trees is different.

48. There are many tracts in the Seegoor forest which have grown Teak for probably a thousand years or more; the tree by its small size shows that the land will grow Teak no more, but grows fine Vengay and Black-wood. Hence it follows that to plant Teak only where Teak grows would be a mistake. Mr. Douglas suggests that the Rupees 3,000 derived from seigniorage at the base of the Anamallays should be devoted to conservancy; no doubt as labour is now obtainable at a cheap rate, more measures of conservancy should be carried out. I have shown in the case of Mudumallay how soon planting more Teak supplies the gaps caused by felling, so on the Anamallays even twelve acres of planting a year would soon overtake the havoc of twenty years' felling.

49. Bolamputty Range. *Plantations.*—The Sholacurry plantation is not progressing, due to disputes about grazing rights, etc., not having yet been settled.

50. Mudumallay Range. *Plantations and Operations.*—In Mudumallay 13,000 Teak-plants have been put out. The season was favourable, and there were but few failures. Twelve acres have been cleared for this year's planting. The total number of plants put out is 43,000 from 1863 to 1871. The trees show fair growth, and if 12 acres are regularly planted every year for 10 years, we shall have a far greater supply of Teak than has been taken out of these forests in the last 20 years; for instance, if an acre at 40 years old only carries two hundred trees at 30 cubic feet, this will equal 6,000 cubic feet per acre. At present we have 43 acres planted; 30 years hence these 43 acres will carry $43 \times 6{,}000 = 258{,}000$ cubic feet, or 12 acres planted annually will equal at the end of 50 years 72,000 cubic feet.

As we have never averaged more than 30,000 cubic feet felled annually for the last 12 years, it is clear that we are planting annually more than double the amount we have ever cut or are likely to cut annually; and yet many assume that the Forest Department does not conserve or plant, but simply fells and sells. It is true that we are perhaps not making equal progress every where, but where, as at Nellumbore, we substitute 200 acres of valuable Teak for 200 acres of nearly useless jungle-wood, we are surely doing a great service to the country; and we may reply that it is better to plant largely where the tree can be produced cheaply than when it can only be produced under difficulties and at a great expense.

51. *Contemplated Operations.*—To plant 12 acres with Teak.

52. SEEGOOR. *Plantation.*—A favourable site has been selected, and seedbeds made for a Sandal-wood plantation.

53. *Contemplated Operations.*—To plant 10 acres.

54. SATTIAMUNGALUM. *Plantation.*—Seven thousand Sandal-wood trees were planted, 8 acres cleared ready for planting; total of plants, 41,000. The trees are progressing favourably, and the formation of new tanks has much facilitated watering.

55. *Contemplated Operations.*—To plant 10 acres with Sandal-wood.

56. COLLEGAL RANGE. *Balarangam and Vylore Plantation.*—Here 10 acres have been planted and 40 acres cleared for planting; the plants are doing well. In a year or two, when water-channels have been constructed and trained men are obtainable, it is hoped that 50 acres will be planted every year; this with 10 at Tullimulli and 10 at Seegoor will make 70 acres annually. At present we have not quite reached 20 acres; but every thing is now prepared for the extension of this very valuable tree.

57. *Contemplated Operations.*—To plant 50 acres with Sandal-wood.

58. WYNAAD. *Plantation.*—Ground has been cleared and a nursery formed for a plantation of 10 acres. The trees grow so well in this part of Wynaad that it is important we should take advantage of nature. A curious thing is that many parts of forest are covered with bamboo; in these parts no Teak-trees younger than the bamboo-clumps are to be seen; this proves what I have long observed that hardly anything, not even grass, grows under the shade or drip of bamboos. Our object is to cut out these bamboo-clumps and plant Teak in their room.

59. The same plan should be carried out on the Anamallays.

60. NELLUMBORE. *Conolly Teak Plantations.*—A considerable amount of work has been done during the past year, notwithstanding Mr. Ferguson's illness and that of many of his establishment. Mr. MacGregor, the Collector, who takes great interest in these plantations, afforded valuable assistance to Mr. Ferguson, or the work would have been much delayed. I have so recently made a full report on these plantations to Government that there is but little to add. The plantations are progressing most favourably; the 200 acres to be planted this year are situated on admirable soil with rivers all round. The addition of the Edawanna land will render it necessary that Mr. Ferguson should have assistance. His difficulties are great and with so vast an undertaking additional assistance would be sound economy.

61. South Canara. *Plantations.*—The total number of plants put out was 5,087, but the total in the plantations is not stated, though the total expenditure is given. Many of the annual reports are deficient in this and other respects, but it was too late to send them back for revision. The necessity of uniformity in the annual report will be impressed upon all Assistants and Overseers.

SECTION III.—License and Voucher-forests.

62. Gumsore and Surada. *License and Voucher.*—Want of water for rafting purposes seems to have limited the amount of wood taken out on license.

63. *Prosecutions.*—These seem to have been successful; the punishments awarded are rather mild and hardly deterrent.

64. Kurnool. *License and Voucher-system.*—Mr. Boileau points out that the forests, measuring nearly 300 square miles, which ought to have been reserved, have been used for licenses, and to render the forest a real reserve a much larger establishment is required. It would be better to limit the reserve to 100 square miles.

65. One Achya is described as claiming more land than he is entitled to, and Mr. Boileau suggests that his land should be freshly demarcated. I am aware that he is supposed to have robbed the Government forests to a large extent by granting passes to parties to cut in Government land as if cut on his own. The Collector suggested that his trees might be counted at a cost of Rs. 200; the suggestion was not carried out, though it seems to me that it would have been better to pay Rs. 200 than to lose thousands. The trees once counted Achya's occupation was gone.

66. Cuddapah. *License and Voucher-system.*—This is carried on the same as before, but Mr. Yarde proposes to work the forests for *Pterocarpus santalinus* (Red Sanders) as an experiment. Probably departmental working may be found the best way of supplying railway fuel.

67. *Forest-products.*—The Collector is unfavourable to their collection by this department.

68. *Criminal prosecutions, etc.*—Here Mr. Yarde dilates upon fires, cattle feeding on saplings and young boughs, and other depredations; in fact, the whole question lies in a nutshell. Which are the most valuable, forests or cattle? The two cannot exist together; one or the other must succumb. Either the cattle will increase and the forest decrease or *vice versa.*

69. Salem. *License and Voucher-system.*—The principal supply of wood in Salem is by this system; the Assistant proposes to reduce the number of licenses by the establishment of central depôts for the sale of wood. There will be a difficulty in finding timber of size, as, with the exception of the untouched Acha-wood forests of Pennagrum, most of the wood in the Salem forests was cut 10 years ago for railway sleepers. The Jaghiredars will also compete, and until their forests are exhausted we cannot expect much return from ours. The Assistant points out that a timber merchant could not dispose of his large timber until it was largely mixed with small scantlings; the people being averse to purchasing logs that required to be sawn up. Until the Jaghiredars limit the felling of trees to those of 3 feet circumference, the destruction of private forests must continue.

I am of opinion that, for the benefit of the country generally, holders of private forests should be compelled to exercise some conservancy in their forests, as by the destruction of their forests they injure not only themselves but their neighbours; the country is dry enough as it is without being rendered more arid by the reckless conduct of private owners. A paternal despotism, such as practised in France, is very necessary in this country.

70. *Forest Offences.*—The Assistant has been successful in the detection and prosecution of offences; 90 per cent. of convictions is very unusual; but Salem is a model Collectorate.

71. South Arcot. *License and Voucher System.*—This system has been somewhat curtailed by departmental felling of first and second-class wood; it will perhaps be difficult to do away with the system altogether.

72. Madura. *License and Voucher-system.*—Under this head nearly 24,000 cubic feet of timber have been taken out of Madura and Periacolum ranges. Possibly, if depôts were established at a few central points, and wood sold by selection and periodically by auction, licenses might be done away with as Government has desired, especially as, in this instance, the wood has realized but 1 Anna and 3 Pies the foot for seigniorage; by departmental management probably a profit of 3 to 4 Annas a cubic foot would be realized; of course, every thing would depend on the demand.

73. Tinnevelly. *License and Voucher-system.*—This has been stopped from the commencement of the official year, and depôts have been formed for the supply of the public and Department Public Works.

74. *Forest Products.*—The return under this head seems large, and the Assistant thinks it might be largely increased by the planting of Cardamoms.

75. *Prosecutions.*—In this Collectorate the convictions seem to have been complete, probably due to the fact that the Collector takes a great interest in forest-matters, and Sub-Magistrates are more vigilant in inquiring into cases.

76. Anamallays. *License and Voucher-system.*—Some measures of conservancy have been introduced at the foot of the Anamallays with effect, due to the zealous performance of his duties by the Overseer in charge.

77. Bolamputty Range. *License and Voucher-system.*—The forest has been worked moderately, and no serious damage has been done by people cutting on license. Grazing rights should be settled, or the valuable forests at the head of the Bolamputty valley will be injured.

78. Segoor and Suttiamungalum. *License and Voucher-system.*—These have been carried on much as usual by forming depôts at two or three important points; it is hoped that departmental felling may in time displace the license and voucher-system.

79. *Contemplated Operations.*—To fell 5,000 cubic feet of Acha, Black-wood, etc., and 3,000 maunds of Sandal-wood.

80. Bhowani. *Floating Operations.*—The floating operations at Nareingapett are being carried on with vigour.

81. *Contemplated Operations.*—To fell 3,000 maunds of Sandal-wood and prepare 10,000 tons of railway fuel also.

82. COLLEGAL.—To fell 3,000 maunds of Sandal-wood, to store 5,000 cubic feet of Vongay and Teak so as to supersede licenses.

83. SOUTH CANARA. *License and Voucher-system.*—There is a small collection under this head.

84. *Prosecutions.*—There were only twelve cases, and nine escaped; this compares ill with Salem.

SECTION IV.—YIELD OF FORESTS.

85. Amount of timber, etc., etc., taken from the forests during the year :—

Forests.	TIMBER.			FIREWOOD.		BAMBOOS.			
	Departmentally.	On License.	Free.	On License.	Free.	On License.	Free.	Brush-wood.	Charcoal.
	C. FT.	C. FT.	C. FT.	TONS.	TONS.	CART-LOADS.	CART-LOADS.	CART-LOADS.	TONS.
Gumsore and Surada ...	1,089	56,270	49,440	390	...	...	...	...	...
Kurnool	...	...	...	...	...	...	...	41	...
Cuddapah ...	500	1,11,020	7,280	786	93½	1,410	2	...	9
North Arcot ...	516	73,000	...	758	...	6,979	...	...	125½
Salem	6,149	30,144	45,587	4,702	122	12,818	2,111½	...	792¼
South Arcot ...	3,630	10,712	21,526	. 221	238	1,391	475	...	6½
Madura	4,797	23,344	...	3,377	...	1,653	...	...	338¼
Trichinopoly and Tanjore ...	...	...	...	...	...	...	...	200	...
Tinnevelly ...	11,058	59,951	...	2,330	...	334	...	...	943½
Singamputty estate	2,161	19,257	...	2,929	...	27	...	...	143¼
Anamallay ...	21,985	404¼	7,033	344	197¾	1,948	1,124	...	8½
Bolamputty and Chenat Nair...	2,598	1,778½	130	968	12¼	1,206¼	57	...	8½
Mudumallay ...	5,165	108	...	...	...	...	...	...	...
Seegurand Suttiamungalum..	...	4,068	...	900	...	200	...	...	...
Bhowany... ...	...	10,670	...	700	...	459	...	...	...
Collegal	...	2,176	...	500	...	200	...	...	...
Wynaad	6,989¾	...	...	...	..	...	...	...	...
Nellumbore ...	...	...	...	...	...	...	...	...	...
South Canara ...	23,531½	2,753	...	...	...	360	367	...	1
Total ...	90,169¼	4,05,655¾	1,30,996	18,905	663½	28,985¼	4,136¼	241	2,376¾

Besides the above there were felled departmentally as follow :—

7,85,925 lbs, Red Sanders.

14,528 Maunds Sandal-wood.

26,803⅓ Tons of engine-fuel.

SECTION V.—FINANCIAL RESULTS.

86. GUMSORE AND SURADA. *Financial Results.*—These, considering the nature of the country, the poverty of the people, and difficulty of getting out the wood, are

satisfactory. More than a small surplus need not be desired; the conservancy of these considerable tracts is important.

87. KURNOOL. *Financial Results.*—These are less than last year; Achya's Passes have no doubt influenced the result.

88. CUDDAPAH. *Financial Results.*—These are satisfactory.

89. NORTH ARCOT. *Financial Results.*—The results are encouraging, and amply justify the appointment of an Assistant Conservator to North Arcot.

90. SALEM. *Financial Results.*—These are satisfactory, but there has been little or no expenditure on plantations, etc., etc.

91. SOUTH ARCOT. *Financial Results.*—These are not very remunerative, still the forests have been conserved at a very small outlay.

92. MADURA. *Financial Results.*—These are but moderate; probably they will become more favourable, if the system of periodical auctions is introduced.

93. TRICHINOPOLY AND TANJORE PLANTATIONS. *Financial Results.*—At present there can be no return.

94. TINNEVELLY. *Financial Results.*—These are not quite satisfactory; it is a question if the price of the timber in depôts has not been fixed too high; should Mr. Hayne be enabled to reduce his felling, carriage, and other charges, he will be in a position to sell more cheaply.

95. ANAMALLAY. *Financial Results.*—These are satisfactory. A profit of Rupees 18,663 is shown with timber to the value of 40,000 Rupees sold but not paid for; this is duly explained by the Deputy-Conservator.

96. BOLAMPUTTY RANGE. *Financial Results.*—The expenditure has been heavy; but there is a large tract of country to conserve and large fuel-reserves to plant up and fence. Mr. Douglas could have shown a large profit had he been able to supply 1,050 teak-sleepers, but want of funds compelled him to decline the contract, but he does not explain why he did not apply for funds.

Mr. Douglas suggests that one range be called Bolamputty, the other the Palghaut Range; the distinction seems necessary.

97. MUDUMALLAY, SEEGOOR, AND SUTTIAMUNGALUM, BHOWANI AND COLLEGAL FORESTS. *Financial Results.*—The report explains that in consequence of a sale at Mysore not taking place, there is a deficit; about 20,000 Rupees of timber was sold at auction after the end of the official year. The stoppage of the railway also had an important effect upon the sale of timber; it was confidently calculated that the railway work would, if proceeded with, have rapidly absorbed all the seasoned timber both in the Mysore, Wynaad, and Muddumallay forests. The results in the other forests are satisfactory.

98. WYNAAD. *Financial Results.*—These are not satisfactory consequent upon no sales having been effected in Mysore before the end of the official year.

99. NELLUMBORE. *Financial Results.*—These would have been better had the stock on hand been disposed of.

100. SOUTH CANARA. *Financial Results.*—These are improving, and will no doubt continue to improve.

FOREST DEPARTMENT.

Annual Account of Forest Revenue for the year 1871-72.

	Rs.	A.	P.
Receipts	4,18,882	10	6
Expenditure	3,45,716	15	0
Balance in favour of Government...	73,165	11	6
Add difference between assets and liabilities at the commencement and close of the year	4,960	1	10
Net Revenue...	78,125	13	4

Detail of difference between Assets and Liabilities at the commencement and close of the year.

Forest Ranges.	At the commencement of the year.			At the close of the year 1871-72.			Difference: In favour of the year.			Difference: Against the year.		
Value of Timber and other Stocks.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Golgonda	...	...	...	...	...	...	...	...	...	...	...	...
Gumsur and Suradah ...	1,141	0	0	831	0	0	...	...	...	310	0	0
Kurnool	1,514	3	0	983	6	4	...	...	...	530	12	8
Cuddapah	22,534	5	9	8,910	7	4	...	...	...	13,623	14	5
Bellary and Cuddapah ...	...	...	...	...	...	...	...	...	...	...	...	...
North Arcot	2,333	5	4	4,388	4	10	2,054	15	6	...	...	...
Salem	2,727	4	6	2,806	12	0	79	7	6	...	...	...
South Arcot	572	10	8	1,364	0	10	791	6	2	...	...	...
Madura	9,708	8	11	10,733	0	2	1,024	7	3	...	...	...
Tinnevelly	4,745	2	1	15,954	8	5	11,209	6	4	...	...	...
Trichinopoly	...	...	...	...	...	...	...	...	...	...	...	...
Anamallay	1,37,656	0	2	1,37,571	8	4	...	...	...	84	7	10
Bolempetty and Chenut Nair	5,026	4	9	5,126	2	4	99	13	7	...	...	...
Mudumallai	1,40,524	2	0	1,35,322	11	0	...	...	...	5,201	7	0
Seigur and Sattiyamungalum	13,715	14	9	8,487	1	9	...	...	...	5,228	13	0
Bhowany	2,500	0	0	10,231	8	0	7,731	8	0	...	...	...
Collegal	9,252	7	0	7,951	7	0	...	...	...	1,301	0	0
Mettoopalayam	...	...	...	...	...	...	...	...	...	...	...	...
Wynaad	32,350	10	10	29,024	1	0	...	...	...	3,326	9	10
Nelumbur	21,750	3	3	30,265	15	1	8,515	11	10	...	...	...
South Canara	22,646	0	0	25,706	6	5	3,060	6	5	...	...	...
Total Assets...	4,30,698	3	0	4,35,658	4	10	34,567	2	7	29,607	0	9
Deduct difference in the value of the Timber between 1870-71 and 1871-72.	...	...	...	...	...	...	29,607	0	9	...	...	...
Balance...	...	...	...	...	...	...	4,960	1	10	...	...	...

SECTION VI.—General Remarks.

102. Gumsore and Surada.—Though no large return is possible, due to the poverty of the country, conservancy is steadily preventing waste.

103. Kurnool.—The canal is not yet in working order; when it is, the demand for timber will no doubt increase.

104. Cuddapah and Bellary.—Unless reserves are freely made over to the Assistant, these dry districts will become more arid.

105. North Arcot.—The appointment of an Assistant has been of great utility, not only for extending the Casuarina plantations, but also for conserving the natural forests which were fast disappearing.

106. Salem.—More planting and departmental felling of railway fuel is required in this range.

107. South Arcot.—Mr. Woolridge is somewhat prolix in his report, but will no doubt be more succinct next year.

108. Madura.—Conservancy in these parts is but commenced. No doubt a few years hence a marked improvement will be manifest in the natural forests.

109. Trichinopoly and Tanjore.—The fuel plantations on the banks of the Cauvery and Casuarina plantation projected in Tanjore will in time be very useful.

110. Tinnevelly.—Free felling seems to have been abused as it has been pretty generally every where; until examples are made of those ryots who abuse their privilege, the abuse is likely to continue.

111. Singamputty Estate Forests.—Conservation here has been found useful.

112. Annamallies. *General Remarks.*—Under this head Mr. Douglas shows how large an amount of timber was lying in the forests, and how advances failed to secure cart-contractors; but raising the rates did secure them. It appears that both the late Deputy-Conservator and the present lost some time in securing the services of cart-contractors. It would have answered better to have kept the Government bullocks for work in the forest, and thus have brought all the outlying timber to the head of the slip, instead of using the bullocks to cart to Mungarah. In Mudumally we had 90,000 cubic feet lying in the forests; by using the Government carts solely for work in the forests, 80,000 cubic feet were carted to the Karkana in two years, and but 10,000 cubic feet remain to be brought in. Mr. Douglas reports that much timber has been carried down the ghaut made by the late Captain Gosling. It seems advisable that only choice timber should be felled on the Annamallies at present, until all old stocks are cleared off. With regard to the mistake in purchasing cattle, etc., I cannot quite agree with Mr. Douglas. In Mudumallay we bought cattle and raised carriage-rates at the same time, it answered, and should also have been successful, on the Annamallies. With regard to advances there is much to be said for and against the system; the most forcible argument in its favour being that if you do not give advances somebody else will; thus carriage is lost at a most important time. The collection of forest-produce by the department is simply advocated to keep out intruders and to retain the services

of the jungle-tribes in our own hands, instead of their becoming bondsmen to the village sowcar which, in most cases, they are at present. Mr. Douglas is quite right in supposing that the sowcars exaggerate their claims. There are many cases of Sholigurs and others who sign papers without knowing the contents and whose labour and that of their progenitors and of their descendants has been mortgaged. A man is a herdsman, a cow is killed by a tiger, the value of the cow is debited to the man and entered in the annual bond with compound interest. To save these people from the sowcar would be an act of charity; to employ them would prevent others engaging them; and it would be easy to forbid credit being given to them. As I have before repeated it is not alone the value of forest-products that we wish to secure; there is their labour and the closing of the forests to unauthorized parties, who think nothing of felling a tree merely to secure the gall-nuts, rather than take the trouble of collecting them when ripe.

113. Bolamputty. *General Remarks.*—I quite agree with Mr. Douglas regarding the deforestment of Waliar jungle. I remember them twenty-seven years ago; I had not seen them for ten years, and certainly the change was marvellous; not only was the country bare of wood, but the greater part was cultivated. The monsoon had apparently receded, (Mr. MacGregor and Mr. Douglas seemed to agree in this,) and appeared no longer to invade the plain but cling to the hills which are yet covered with forest. I should estimate that very considerable damage had already been done to the Coimbatore side by the loss of the monsoon. I should say, from what I know of Coimbatore and Waliar, that the monsoon had receded five miles. I quite agree with Mr. Douglas about the importance of these reserves. What is required is a belt of forest stretching from the hills on the north, to Cochin on the south, about four miles in length, north and south by at least half a mile in width; this belt might carry on the monsoon to its original limits. With regard to the sources of the Noel river, Mr. Douglas does not think it would be worth the expense of re-planting the scrub that has sprung up from "Komeri," but would rather leave time to cover the hill-side.

114. Mudumallay, Seegore, and Suttiamungalum, Bhowani and Collegal. *General Remarks.*—Under this head the Deputy-Conservator's remarks speak for themselves, and I have nothing further to add, especially as a report, on the state of the Cauvery river has been lately sent in.

115. Wynaad. *General Remarks.*—Mr. Peet is quite aware of the necessity there is of our securing the Poolpilly temple forests if possible. At present they are simply being destroyed, and I much fear they will only be made over to us when utterly ruined.

116. Nellumbore Conoly Teak Plantations.—Having so lately furnished a report on these plantations, I would briefly add that they promise well, and with the 3,000 acres of extension contemplated will secure for the coast from Bombay to Madras an excellent supply of Teak for future generations.

117. South Canara. *General Remarks.*—It is now twelve years since an Assistant was sent to these forests; his time for two years was nearly all taken up in pruning Teak and Black-wood trees; some results ought now to be apparent, but the Overseer does not notice them. Fever seems to have been very prevalent; the Collector has

suggested various remedies, such as planting Eucalypti, sun-flowers, etc. A special report has been called for by the Board of Revenue this will shortly be submitted.

(Signed) H. R. MORGAN, Lieut.-Colonel,
Acting Conservator.

GENERAL REMARKS BY THE CONSERVATOR.

118. The re-organization of the department has been sanctioned by the Supreme Government, and the Forest Establishment in each range is to be placed under the immediate charge of the Collector, the head Revenue-officer. It is impossible that the Collectors can visit all the forests in their ranges, or even attempt the supervision of them in some cases. The Collector of Coimbatore, for instance, will have under him the two most important forests of the Presidency, namely, the Anamallays and Mudumallay; the former 50 miles from Coimbatore, and the latter 90, and both in opposite directions, besides the entire ranges of Bhowani, Collegal, Seegoor, and Suttiamungalum and Bolamputty, including nearly all the Sandal-wood tracts in the Presidency; all which forests and ranges have always occupied the Conservator for a considerable portion of the year. If, however, the new scheme results in the entire amalgamation of all forest-interest in each district under our department, it will, in the Conservator's opinion, be an improvement upon the present system. There will no longer be two separate departments working for the same object in one and the same district, and quite antagonistic to each other, and the Forest Department will obtain the powerful aid of the Collector, and all the Revenue-officials, which is seldom the case as matters now stand. The Native Revenue-officials having certain tracts entirely in their hands are rivals with an antagonistic to the Forest Department and their interests, and the one branch is often quite ignorant of what the other is doing; the rules and regulations are different, and the openings to smuggling, etc., very great; in fact, nothing could militate more against proper conservancy. Government have ruled that the funds accruing from Local Jungle Conservancy are to be kept distinct from Imperial conservancy, and to be credited to Local Funds; this, however, need not prevent the placing of forest interests under the specially trained department; it will only be necessary that the accounts should be kept distinct. It will, however, be a matter of considerable difficulty to draw the line between Local and Imperial conservancy, and it is feared that it may lead to much complication, particularly in the accounts; and the Conservator would rather have seen an entire amalgamation of the accounts and everything, with a periodical crediting to Local Funds of a certain percentage on receipts. It has for long been his opinion that the whole or nearly the whole of the forest-revenue in some of the railway districts is required for several years to come in the up-keep and improvement of the forests and their communications and in plantations, etc. In any case it is sincerely hoped that there will not, in future, be two departments or two different branches working for the same object, or there will be little or no increase on the present revenue. The Forest Department should, in future, do all the executive, and

the Revenue Department should receive all the money; and this double check against peculation and bribery cannot but fail to show great results, and the Forest Department should be responsible for all planting operations, instead of Tahsildars and others, utterly ignorant of the subject, being allowed to squander money on abortive and petty attempts at planting, etc.

119. The *Flora Sylvatica* for this Presidency is now nearly completed. The 24th No. being in the press, the work will be complete in 26; the preparation of this has been a very arduous task; the Conservator's whole time beyond Office hours having been completely occupied by it.

(Signed) R. H. BEDDOME, Major,
Conservator of Forests.

APPENDIX A.

FOREST OFFICE,
RUSSELCONDAH, *22nd June* 1872.

From

MR. T. G. FREEMAN MACCALLY,
Overseer of Forests, Goomsur,

To

MAJOR R. H. BEDDOME,
Conservator of Forests, Ootacamund.

SIR,—I have the honour to forward my Annual Report and Accounts for the official year 1871-72.

2. In this year the tracts of forests from Kookloobah, Condagullery, and Gullery to Sooradah, north to south, and from Kondagardlo, Rajanah, Koorchilly, and Boogoodah, to Gaujalabaudy, Doho, Berecote, Doorpingiah, and Doorgaprasaud, east to west, have been duly visited. Ill-health prevented me from proceeding farther on the northern and eastern frontiers of my range.

3. I would beg to add to the forests I have noted in former reports that of the Pundacole Mootah (Sooradah Taluq) recently brought under Government control, and hence under conservancy. The portions of forest in this tract which I had visited from Pipulpunka to Gaujalabaudy, a distance of about five miles, was not continuous, being interspersed in a northerly direction by the cultivation in the villages of Doobooky, Sano, and Bodogotcha, Kauloomah, Nahagoondah, Kojerepully, and Gaujalabaudy. The inhabitants of this tract are Ooriahs. The orders regarding the reserved and unreserved trees, and the privileges of ryots to the unreserved wood for their *bona fide* wants in the erection of their houses and agricultural purposes and fuel for their own use free of taxation were duly explained to them. Copies of the latest orders of the Collector on the subject had been circulated by the Sub-Magistrate of Sooradah and affixed in several of the important villages for the information of the Mootah. They were also informed that all existing Koomary cultivation would be duly respected; and should they require new grounds for this purpose in future that it could only be granted with the permission of the Collector after the examination of the locality by this department.

4. This tract contains the reserved and unreserved kinds of trees similar to those in Goomsur, and in the portions of it bordering on Pipulpunka some fine and promising Sâl and Pia Sâl trees were seen of 4 to 6 feet girth; these I have specially reserved for Government purposes. I have issued no licenses for felling within it, nor has there been any demands.

5. I am informed that the Mootah contains upwards of 380 acres of cultivation, for which a nominal annual kist or revenue of Rupees 100 is paid, and that it is about 12 miles in length and about 4 in breadth. I have advanced into it from Pipulpunka to Gaujalabaudy, reserving the portions of forest I have found within and immediately around these villages until the Mootah is properly explored, and will confine the conservancy operations to the tracts below ghauts similar to that of Goomsur.

6. While in the Koorchilly Mootah I went through the forest to the Koendagawlo Hill, via the villages of Bowanpoor, Konaipoor, and Singapoor, to Koreamah, and from thence via the hill-range of the village of Poonnyapadah, which is now extinct since the inhabitants had died in it from starvation during the famine of 1865-66. From this melancholy site, I, ascending a smaller range, arrived at the village of Rajanah in a narrow defile, and after passing a small Ratan jungle in the bed of the stream near the foot of the hills here, I ascended the Koendagawlo Hill, which was rather trying from its being very steep.

7. The summit of this hill resembles a saddle; on the highest portion of it is the Grand Trigonometrical Station. It has a perpendicular cleft in it south-east, but not throughout as one would imagine. It is visible above the body of the hill, which gives it the appearance of an irregular saddle in the distance. In the gap attached to the clefted portion stands a block of

granite about 6 feet high of a prismoidal figure, over-hanging the precipice below ; it is sacred to the Khonds here, and is called by them the " Kondarowlo" deity. They will not permit any person to approach it. The block is partly detached from the lower portion of the saddle, and one would be nervous to approach it, fearing accidents by precipitation into the chasm below. The elevation of this hill would be about 2,775 feet.

8. The whole of the forest from Koreamah to Kondagawlo contains many valuable Sâl trees from 5 to 6 feet, and a few of 7 to 8 feet girth, with other reserved and unreserved trees of smaller girth, except on the Punneyapadah Range where the Sâl was scarce, and here a few Sissua and Pia Sâl were observed on rocky localities of 3 to 4 feet girth with Doho and Bamboo jungle growing together. The Sâl occupies the slopes of the Kondagawlo Hill until within a short distance of its summit ; the trees are then thin and scattered. Many plants of ferns cover the slopes.

9. The Rattan jungles discovered by me are situated in three places of my range ; at Kondagawlo, Kelady, and Boodecoel. The canes or stems, however, are not of greater girth than two inches, as there was unmistakable evidence at these places that those of larger girth had been removed ; and I do not see that they will attain any greater girth unless they are reserved, and the public prevented meddling with these jungles.

10. In one of the spurs of the Boodecool Hill called " Danacool," where I went in one of the defiles of it to search for Ratan, I discovered a creeper called in Ooriah " Anamoontha Moodo." It is completely fibrous, and is an uncommon plant in Goomsur. Its appearance is like a propeller screw ; the spiralness and compression on the arms and axis of the plant is natural ; the bark is dark in colour, lightly mottled with reddish spots, and its leaves lanceolate.

11. During my tours of inspection in the Juggernathprasaud Mootah, I have observed that about 200 acres of forest-land had been given up in patches to eighty persons on kowle for cultivation in Faslis 1273 and 1274 ; the clearances have been made, and are under cultivation. Also in pursuing my course from the Gantipully forest west, I went through the Kulladhara forest which extends to Chodakye and Somurbundho in a northerly direction. I came upon the estate of Deenabondho Putnaick, Tahsildar and Deputy-Magistrate of Boad, which is 92 acres of this dense forest of Sâl which had been purchased by him for Rupees 645 in 1864. The above 200 acres granted on kowle and the sale of the 92 acres appear to have been disposed of under the Waste Land Rules without any reference to the Forest Department.

12. Many Myrobalam trees have been destroyed in the forests by Khonds and Panos for the nuts from sheer laziness to collect them otherwise. No evidence could be procured to convict these people for the mischief they had committed, and in the absence of proving a conviction before a Magistrate was obliged to warn them for their future conduct.

13. I informed the Collector the various places of my range where the Myrobalam trees had been destroyed, and proposed that parties collecting the produce of these trees may be registered by the Forest Department, and that the registered parties be held responsible for the safety of the trees they make their collections from ; otherwise that collections by unregistered parties should be confiscated by the Forest Department, and sold for the benefit of Government. The publication of a Circular to this effect, in addition to any other orders issued by the Collector may be productive of beneficial results. I am in daily expectation of orders on the subject.

14. Two or three hundred cart-loads of Myrobalams have passed through the Goomsur forests to the coast during the year from Nowaguddah, Duspullah, Sonapore, and Sumbhulpore, etc., of Cuttack and Raepore Districts, and Bodogodah and Runabah Zemindaries of Ganjam District, and from the Maliahs of Goomsur and Chinna Kimedy, and the forests below ghauts of Goomsur, transmitted by parties who trade in this article. The impression of the public is generally that all the nuts that have passed to the coast belonged to Goomsur, and many exaggerated rumours have prevailed on the subject. The Myrobalam trees are not so common in Goomsur below ghauts as may be supposed.

15. Many applications for Bunjur lands on Kowle for cultivation in the Goomsur forests were referred by the Tahsildar of Goomsur to this department during the year ; the localities were duly examined by me, and reported upon, granting consent or dissent according to the

quality of the forests inspected. In one case I discovered that seven of the applicants had felled portions of the forest they had applied for, and brought it under cultivation before ever the ground was examined ; they were accordingly prosecuted, and each party was fined Rupees 4 by the Sub-Magistrate of Goomsur.

16. My little plantation at present contains 300 trees as noted below :—

Teak...	150
Jonesia Ashoka.	85
Sumach	5
Babool	5
Inga dulcis.	50
Sapindus emarginatus	5

A number of trees which had been transplanted during the year have died owing to the great heat of the weather. Water was also scarce : attempts will be made this year to transplant during the height of the monsoons, when the temperature of the weather here would be more favourable for this purpose.

17. 2,472 cart-loads of unreserved kinds of wood equal to 49,440 cubic feet, were felled and removed from the forests, free of taxation, for the re-construction of 245 houses of ryots burnt during the year. This annual drain on the forests is on the increase, and as long as the ryots are unconcerned in precautionary measures it will never be on the decrease : if they were warned that they would be taxed for the wood annually used for this purpose, as they were before 1865, I think it would stimulate them to activity in adopting the necessary precautionary measures for the safety of their houses and villages. Having in former reports referred to the origin of these fires, it is needless to report it here ; suffice to say, it is an annual evil and misery to the parties concerned, and should be stopped, if possible. These fires are annual among the Oorialis in lower Goomsur, (who have larger houses than the Khonds,) while it is a rarity to hear of it in the Khond country, which proves the care bestowed by the Khonds in the preservation of their villages.

18. Fifty-two cart-loads of reserved wood equal to 1,089·532 cubic feet, and 8½ cart-loads of fire-wood, equal to 3¾ tons, were felled and removed from the forest by this department. There being little demands, the felling of more wood was found unnecessary.

19. Thirty-six logs of reserved wood, equal to 662·987 cubic feet, were sold by this department for Rupees 180-4-0, and 8½ cart-loads of fire-wood, equal to 3¾ tons, for Rupees 8-8-0, making a total of Rupees 188-12-0.

20. The Department Public Works, No. 3 Range, Russelcondah, was supplied with 188 logs of Sâl timber from this department, containing 1,779·294 cubic feet, to the value of Rupees 425-8-0 from January to March 1872. No demands were made by No. 2 Range, Berhampore, or by the Engineer officer at Vizagapatam, consequently a small supply of timber has only been maintained in depôt to meet any emergency.

21. 2,813½ cart-loads of reserved and unreserved wood were removed from the forests, equal to 56,270 cubic feet, with 895¾ cart-loads of fire-wood equal to 390 tons, the seigniorage of which amounts to Rupees 3,659-8-6. The failure of the monsoons when rain was specially required at its close caused a falling off in seigniorage-collections. Many of the parties who had taken out licenses for rafting failed in the attempt from want of water, and their rafts are scattered in the bed of the Mahanuddee of Goomsur and in various localities between Gullery and Nowgaum, and will have to await the freshes of the ensuing monsoons ; this induced others to draw back sharing the same fate. The want of water since the cessation of the monsoons has been severely felt by man and cattle, and their sufferings were so great that, for their relief, small ponds for water in places where it was most necessary were constructed at Government expense, which is a great boon to the public.

22. Thirty-four persons were prosecuted for forest-offences during the year and sentenced by the Sub-Magistrate of Goomsur to the following punishments :—Two, to one month's rigorous imprisonment ; two, to one month's simple imprisonment ; and thirty to fines, namely, one, Rupees

10 ; two, at Rupees 5 each ; seventeen, at Rupees 2 each ; seven, at Rupees 4 each ; and three, at Rupees 3 each; of these thirty persons fined, one was a peculiar case in which the party had felled two cart-loads of Sâl-wood without a license, and worked them into twelve small blocks which he packed in his two carts, containing Gingelly oil and Mustard seeds, but it was detected on its route to Bellahgoontah ; the blocks were removed from the seeds and confiscated, and the man was fined the trifling amount of Rupees 5 which he paid up without the least demur ; the rest were cases of encroaching on forest-lands in extension of cultivation, and felling of forests for Bunjur lands without permission, and felling of wood without licenses. Notwithstanding the orders recently issued by the Acting Collector, Mr. Ellis, in 1870, regarding the prevention of cultivation of forest-lands, the practice has been as yet wholly unchecked, and prosecutions by this department are constant.

23. The health of myself and establishment has been indifferent; one and all have had the usual amount of fever, and I am at present suffering from its effects. One Peon died of Beriberi.

24. I beg to append five statements A, B, C, D, E, in addition to the usual Annual Returns which accompany this report. The revenue, I regret to say, has not amounted to what was originally anticipated. The want of rain during the monsoons and the partial failure of the crops in several parts of this district, especially in the southern portions of it, have proved obstacles to parties coming up here for wood, and their principal object has been to procure grain as much as possible for their consumption and traffic, believing from the failure of the monsoons that a famine was expected. The demands from the Department Public Works, No. 3 Range, Russelcondah, has been very small.

25. The total amount of receipts has been Rupees 3,884-7-0 and the value of timber supplied to Department Public Works, Rupees 425 8-0, makes a grand total of revenue of Rupees 4,309-15-0 ; deducting from this the expenditure of Rupees 3,137-13-6, leaves a balance of Rupees 1,171-1-6 in favour of Government, minus Rupees 310 being decrease in value of stock.

I have the honor to be,
Sir.
Your most obedient Servant,
(Signed) T. G. F. MacCALLY,
Overseer of Forests, Gumsur.

FINANCIAL RESULTS.

	Rs.	A.	P.			
Receipts—						
I.—Sale of timber at depôts	188	12	0			
II.—Sale of timber removed by purchasers ...	3,659	8	6			
VII.—Sale of confiscated timber	36	2	6			
				3,884	7	0
Value of timber supplied, Department Public Works, No. 3 Range				425	8	0
Total Receipts...				4,309	15	0
Expenditure—	Rs.	A.	P.			
Conservancy and working	497	1	0			
Establishment	2,544	0	0			
Office contingencies	96	12	6			
				3,137	13	6
Balance in favour of Government				1,171	1	6
Decrease in stock				310	0	0
Net financial results				861	1	6

A.

Annual Summary of Revenue and Expenditure of the Goomsur and Suradah Forests for the official year 1871-72.

Classification.	Amount. Rs.	A.	P.
Receipts.			
I.—Sale of timber at depôts	188	12	0
Do. value of timber supplied to Department Public Works	425	8	0
II.—Sale of timber removed by purchasers	3,659	8	6
VII.—Sale of confiscated timber	36	2	6
Total Receipts	4,309	15	0
Conservancy and Working.			
I.—Timber expenses	176	10	0
III.—Feed and keep of cattle...	284	7	0
VI.—Plantations	36	0	0
Total Conservancy and Working...	497	1	0
Establishment.			
I.—Salaries..	2,184	0	0
II.—Allowances	360	0	0
III.—Contingencies	96	12	6
Total Establishment	2,640	12	6
Grand Total Expenditure ...	5,137	13	6

B.

Details of departmental Felling of Timber, etc., for the official year 1871-72.

Division of Range.	Description of Timber and other Forest-produce.	No. of Cubic Feet.	No. of Maunds.	Rate of Valuation per Cubic Foot.	Rate of Valuation per Maund.	Total Valuation. Rs.	A.	P.
1	2	3	4	5	6	7		
			Tons.					
Goomsur and Suradah.	Sâl	969·976	.....	Timber sold according to the size of the logs; fire-wood per cart-load.	Timber sold according to the size of the logs; fire-wood per cart-load.	263	4	0
	Pia Sâl ...	88·992	.....			24	8	0
	Holondho ...	30·564	.....			8	0	0
	Fire-wood...	.....	3¾			8	8	0
	Total...	1,089·532	3¾	.....	.....	304	4	0

C.

Details of Sales from Depôt of Timber, etc., during the official year 1871-72.

Name of Depôt.	Description of Timber or other Forest-produce, Number of Cubic Feet or Maunds sold, and rate of Valuation per Cubic Foot or Maund.			Total Valuation.			Total Amount actually realized.			Difference between Columns 3 and 4.	Explanation of Difference.
1	2			3			4			5	6
		C. FEET.	TONS.	RS.	A.	P.	RS.	A.	P.		
Russelcondah.	Sâl	2,918·082	...	478	4	0	478	4	0		
	Pia Sâl ...	186·401	...	45	8	0	45	8	0		
	Holondho...	15·429	...	4	0	0	4	0	0		
	Sohon ...	21·154	...	3	0	0	3	0	0		
	Fire-wood...	...	3¾	8	8	0	8	8	0		
		2,241·066	3¾	539	4	0	539	4	0		
Gopaulpore ...	Sâl ...	201·215	...	75	0	0	75	0	0		
	Total ...	2,442·281	3¾	614	4	0	614	4	0		
	Total showing aggregate Increase or Decrease ..									.....	.....

D.

Particulars of Timber Stock in hand at the Commencement and Close of the official year 1871-72.

Description of Timber or Forest-produce.	Number of Cubic Feet.	Number of Maunds.	Rate per Cubic Foot or Maund.	Total Valuation.		
1	2	3	4	5		
Stock on 1st April 1871.				RS.	A	P.
Sâl	4,440·409	.....	Value according to the size of the logs.	851	0	0
Pia Sâl	118·185	.....		28	0	0
Holondho	66·225	.....		16	0	0
Sohon	786·382	.....		246	0	0
Total	5,411·201	... ..	.....	1,141	0	0
Stock on 31st March 1872.						
Sâl	3,191·088	.....	Value according to the size of the logs.	561	0	0
Pia Sâl	20·776	.....		7	0	0
Sohon	765·228	.....		243	0	0
Holondho	81·360	.....		20	0	0
Total	4.058·452	.....	.....	831	0	0
Grand Total ...	9,469·653	.....	... ..	1,972	0	0
Add total valuation of timber and forest-produce felled during the year as per column 7, Statement B.				304	4	0
Total				2,276	4	0
Deduct total valution of timber, etc., sold during the year as per column 3, Statement C.				614	4	0
Total				1,662	0	0
Compare remainder with total under column 5				1,972	0	0
Decrease in stock ...				310	0	0

E.

Details of Timber, etc., removed from Forests under Voucher and License System for the official year 1871-72.

Description of Timber or Forest-produce.	Number of Cubic Feet.	Number of Maunds.	Rate of Seigniorage or Sale per Cubic Foot or Maund.	Total Receipt under each Head.
1	2	3	4	5
		TONS.		RS. A. P.
Sâl	36,590	.....	Seigniorage at different rates per cart-load.	2,785 14 0
Sahaja	3,100	.....		155 0 0
Holondho	2,040	.....		78 3 0
Bundhano	860	.....		43 0 0
Jungle-wood	9,320	.....		234 0 0
Pia Sâl	3,200	.....		174 12 0
Sohon	220	.....		11 0 0
Kossy...	120	.....		4 8 0
Doho	340	.....		13 0 0
Kussum	340	.....		12 12 0
Moholo	80	.....		3 0 0
Sissua...	40	.....		3 0 0
Hendhu	20	.....		1 8 0
Fire-wood	.....	390		139 15 6
Total ...	56,270	390	.....	3,659 8 6

(Signed) T. G. F. MacCALLY,
Overseer of Forests, Goomsur.

APPENDIX B.

ASSISTANT CONSERVATOR'S OFFICE,
NUNDIAL, 17*th June* 1872.

From

E. H. BOILEAU, ESQ.,
Acting Assistant Conservator of Forests, Kurnool,

To

MAJOR R. H. BEDDOME,
Conservator of Forests.

SIR,—I have the honour to forward my Annual Administration Report for the official year 1871-72.

SECTION I. *Inspection-tours of the Officer in Charge.*—Mr. T. S. Boileau took over charge of the district from Mr. Brougham on the 22nd of May 1871; Mr. Brougham taking charge from Mr. Morgan on the 8th of April. Mr. T. S. Boileau leaving the district before my arrival, he gave over charge to the Forest Overseer, Mr. E. Dampier, on the 31st of January 1872, who was ordered to hand over charge to the Nundial Deputy-Collector, from whom I received charge of the district on the 22nd of February 1872.

The whole of the Range was visited by Mr. T. S. Boileau, with the exception of the northern part of the Markapoor Taluq. Sales of confiscated timber have been held in about 100 villages.

SECTION II. *A. Reserved Forests and contemplated Operations.*—The nominal reserved forests are about twenty miles in length by about fifteen miles in breadth, being bounded on the north by the Yellegode Canama and on the south by the Nundy Canama. I say "nominal" reserves, for, when taking over charge, I found that the principal revenue was derived from the very part which ought to have been closed to the public, namely, the Yellegode and Basawapuram forests. Even were the forests abovementioned closed, it would still be only a "nominal" reserve, unless a much larger establishment is sanctioned.

One of the "Durkhast" owners, by name Atchaya, possesses more land than he is entitled to. He is supposed to own about 1,500 acres, but when visiting his forests I discovered that he has two separate pieces of jungle, each of which, I should say, would be more than 1,500 acres, and I should, therefore, deem it necessary to have his land re-surveyed.

B. *Plantations.*—There are two plantations under my charge, Woncarrum and Muthykondan; the former is about 15 acres in extent, containing 801 Mango trees (*Mangifera Indica*) and 164 Redwood (*Adenanthera Pavonina*). The plantation is in good order, and the trees are remarkably healthy and well grown. Mr. T. S. Boileau had some fresh nursery-beds formed and sown with the following seeds:—

Innamuddy (*Terminalia tomentosa*).
Somee (*Soymida febrifuga*).
Billu (*Chloroxylon swietenia*).
Karnaga.
Sarmbramnie.

A great portion of which have germinated; the Somee especially taking to the soil, and consequently are fine, healthy, young plants. The expenditure was Rupees 316-9-6. The latter plantation has about 150 teak trees (*Tectona grandis*). I cannot say that this plantation thrives at all well; the trees are so stunted and crooked that the tallest tree is about 12 feet with a girth of about 8 inches. The cost was Rupees 27-14-0. At Nundial there is a small nursery which is kept up for the purpose of giving plants to ryots gratis for planting round wells, etc.; the Revenue authorities also are supplied for topes, which are taking the place of avenues.

C. *Fuel-reserves, etc.*—None.

Section III. *Voucher and License System.*—The principal licenses issued are to Soucars, who have their own depôts, from which they are able to under-sell us, and thereby injuring our chance of selling our depôt-timber. The number of bandies taken out of these forests are as follow :—

13,808½	bandies	of timber.
41	do.	of bark.
58	do.	of fire-wood.
7,605½	do.	of bamboos.
21,513	Total bandies.	
20,502	Cavady-loads	of charcoal.
6,176	bullock-loads	of bamboos.
1,300	head-loads	of fire-wood.
27,978	Total.	
49,491	Grand Total	

Very little departmental felling has taken place for the year under review. The demand being so small, the timber in the depôts is deteriorating from dry, rot, and exposure to the weather. Mr. T. S. Boileau endeavoured to float timber to Kurnool, but the attempt was a failure, partly on account of the number of coolies required for towing, and also on account of the wood having sunk to the bottom of the canal ; thereby showing that carting is cheaper than floating.

Section IV. *Yield of Forests and Expenditure.*—The expenditure was Rupees 686-0-3. This amount was chiefly paid to the gardeners on the plantations and also for the carriage of confiscated timber.

Section V. *Financial Results.*—The revenue for the year is Rupees 33,593-9-11, or Rupees 11,328-15-7 less than that of the previous year. The great decrease of revenue is owing to there being no demand from the Madras Railway and the Madras Canal Companies. The Department Public Works also have not taken a single log from these forests. Another reason is, that every Native is becoming a ryot ; at least it seems so, as there have been only 58 bandies of fire-wood for the whole year. Mr. Sheffield, too, in his yearly Report for 1869-70, says, " It is not to be expected that future years will be as favourable as this has proved," (paragraph 14).

Section VI. *General Remarks.*—A new depôt has been opened at Kurnool with the sanction of the Collector and Conservator ; this depôt, I think, will be a decided success, as the 23 teak-logs which were sent there for sale were sold on the very day of their arrival. The Peons and other subordinates have suffered a great deal from fever and guinea-worm. Mr. T. S. Boileau was also very ill for about three months.

I have the honour to be,

Sir,

Your most obedient servant,

(Signed) E. H. BOILEAU,

Ag. Assistant Conservator of Forests.

STATEMENT A.

Annual Summary of Revenue and Expenditure in the Kurnool Division during 1871-72.

Receipts.	Rs.	A.	P.
I.—Sale of timber at depôts	677	12	1
II.—Sale of timber removed by purchasers	31,745	6	0
IV.—Permit Fees and rent of Jungles	3	1	4
VI.—Sale of fruits	166	11	3
VII.—Sale of confiscated timber	839	13	8
IX.—Miscellaneous	160	13	7
Total Receipts...	33,593	9	11

Conservancy and Working.	Rs.	A.	P.
I.—Timber expenses	325	15	9
II.—Purchase of stock and cattle	7	14	0
VI.—Plantations	344	7	6
X.—Communications and buildings	7	11	0
Total Conservancy and Working...	686	0	3

Establishments.			
I.—Salaries	5,566	5	6
II.—Allowances	828	7	10
III.—Contingencies	229	12	2
Total Establishment...	6,624	9	6
Grand Total Expenditure ..	7,310	9	9

STATEMENT B.

Details of Departmental Felling of Timber during the official year 1871-72.

Division of Range.	Description of Timber and other Forest-produce.	No. of Cubic Feet.	No. of Maunds.	Rate of Valuation per Cubic Foot.	Rate of Valuation per Maund.	Total Valuation.
1	2	3	4	5	6	7
				Rs. A. P.		Rs. A. P.
Cumbum	Innamaddy.	311 11 0	.....	1 0 0	.....	311 14 8
Total...	.....	.....	.....	.....	.....	311 14 8

STATEMENT C.

Details of Sales of Timber from Depôts during the official year 1871-72.

Name of Depôt.	Description of Timber or other Forest-produce ; Number of Cubic Feet or Maunds sold under rate of Valuation per Cubic Foot or Maund.	Total Valuation.	Total Amount actually realized.	Difference between columns 3 and 4.	Explanation of Difference.
1	2	3	4	5	6
		RS. A. P.	RS. A. P.	RS. A. P.	
Kurnool	Teak at 2-0-0 per cubic foot, 174′ 11″ ...	349 13 4	316 8 9	33 4 7	Rates reduced from 1st January 1872.
Nundial	Innamaddy, at 1-4-0 per do. 64′ 2″ ...	80 3 4	64 2 8	16 0 8	Do. do.
Cumbum	Do. { part at 1-4-0 per c. ft. / part at 1-0-0 do. } 294′ 1″ ...	212 0 4	297 0 8	14 15 8	Do. do.
	Total...	742 1 0	677 12 1	.....	
	Total showing aggregate decrease ...			64 4 11	

STATEMENT D.

Particulars of Timber Stock in hand at the commencement and close of the official year 1871-72.

Description of Timber or Forest-produce.	Number of Cubic Feet.	Number of Maunds.	Rate per Cubic Foot or Maund.	Total Valuation.
1	2	3	4	5
Stock on 1st April 1871.		Rs. A. P.	Rs. A. P.	Rs. A. P.
Innamaddy	834 10	.....	1 4 0	1,043 8 8
Do.	20 9	.....	1 0 0	20 12 0
Teak	257 1	.....	1 12 0	449 14 4
Total...	1,112 8	.....	.....	1,514 3 0
Stock on 1st April 1872.				
Innamaddy	809 3	.....	829 5 4	
Teak	82 2	.....	154 1 0	
				983 6 4
			Grand Total...	2,497 9 4
Add total valuation of timber and forest-produce felled during the year as per column 7, Statement B.				311 14 8
			Total...	2,809 8 0
Deduct total valuation of timber, etc., sold during the year as per column 3, Statement C.			742 1 0	
Do. decrease in value by reduction of rates			100 10 4	
				842 11 4
			Remainder...	1,966 12 8
Compare remainder with total under column 5				2,497 9 4
			Decrease in value of Stock...	530 12 8

STATEMENT E.

Timber, etc., removed by purchasers under Voucher and License system.

Description of Timber or Forest-produce.	Number of Cubic feet.	Number of Maunds.	Rate of Seigniorage or Sale per Cubic feet or Maund.	Total Receipts (under each head.)
1	2	3	4	5
				Rs. A. P.
Seigniorage on Wood	.....	.....	.....	27,542 0 6
Do. on Bamboos	.....	.....	.....	2,881 7 6
Do. on Charcoal...	.....	.....	.....	1,321 14 0
Total...	.....	.....	.....	31,745 6 0

Free Licenses issued to Ryots for the official year 1871-72 *(not including Fire-wood.)*

For burnt houses... ...	659	bandies of Jungle-wood.
,, ,, ...	215	do. of Bamboos.
Total...	874	
For cultivation..... ...	364	bandies of Jungle-wood
,, ,, ...	120	do. of Billu and Chiriman.
Total,..:	484	
Grand Total...	1,358	

(Signed) E. H. BOILEAU,
Acting Assistant Conservator of Forests.

No. 98.

ASSISTANT CONSERVATOR'S OFFICE.
NUNDIAL, 19*th June* 1872.

From

E. H. BOILEAU, Esq.,
Acting Assistant Conservator of Kurnool Forests,

To

MAJOR R. H. BEDDOME,
Conservator of Forests.

SIR,—I have the honour to inform you that it is quite impossible for me to get ready the statement E., as in April 1871 one of the Tahsildars did not send in his accounts; at any rate it is not. in the Nundial Forest Office. The other statements I have attached to my Administration Report In the list showing the number of bandies under Section III., I cannot be certain about its being correct for the same reason as mentioned above. I am sorry to have detained your annual Report so long; but if you recollect I have ere this sent in two Administration Reports of mine, and then you must remember that I have been out in the district for 26 days. I am unable also to send the account showing the number of bandies taken out of these forests on Free Licenses, as no less than three out of the six Tahsildars have not sent in their account, although I have written about it before, and to-day am writing again. I append the accounts of the number of bandies which have been sent in by the other three Tahsildars:—

—	Bandies.	Bullock-loads.	Head-loads.
1st, Nundial...	3,918	...	...
2nd, Sirwell...	3,215	165	990
3rd, Markapur	1,169	...	...
Total...	8,302	165	990

4th, Nundykotkur... ... ... Not sent in.
5th, Atmakoor..... ... ... Do.
6th, Cumbum..... ... ... Do.

These accounts shall be sent in directly they arrive,

APPENDIX C.

No. 15.

OFFICE OF ASSISTANT CONSERVATOR OF FORESTS,
CAMP CODOOR, *15th April* 1872.

From

MR. H. H. YARDE,
Assistant Conservator of Cuddapah, etc., Forests,

To

MAJOR R. H. BEDDOME,
Conservator of Forests, Ootacamund.

SIR,—I have the honour to submit you the Annual Administration Report of my Range for the official year 1871-72, together with the necessary accompaniments revised.

SECTION I.

2. *Introductory Remarks mentioning the Name of the Officer in Charge.*—Throughout the year for which this has reference to, I have continued in charge of the Forest Range of Cuddapah, together with the Railway Fuel Plantations in this district and that of Bellary at Ghooty, assisted by my only Overseer Mr. Humphrey Stafford. Mr. T. S. Boileau, an Assistant Conservator, joined my office about the 8th May from Madras, remaining with me and travelling over the Range till the 20th May 1871, when he left for Nundial to take charge of the Nullamullay forests in the Kurnool District, after having made himself acquainted with the working of the license and voucher system forest, as also the accounts branch and plantation work. During the period he remained, he visited all the plantations under my charge, with the exception of Ghooty.

Mr. E. H. Boileau, an Assistant Conservator, reported his arrival at Codoor on the 11th January, leaving on the 15th February 1872 for the purpose of taking over charge of the Kurnool forests; previous to which he made himself conversant with the departmental method appertaining to a license and voucher working forest.

Mr. G. Hadfield, an Assistant Conservator, is now learning the duties of a Range Officer since the 6th March, and I opine he will be qualified by the 15th April 1872 in the accounts branch, license and voucher, and plantation operations, and by that time he will have visited all my plantations. He is now constantly accompanying me in travelling over the hill-forests, etc., in the Cuddapah District.

Mr. E. W. Coxe, who was appointed a Red Sanders Clerk in lieu of Mr. Clarke, remained here for eleven months, and was, on the 11th January 1872, promoted to a 3rd-class Overseership in the Salem District. For the time Mr. Coxe was under me he was in the capacity of a Probationer for the Overseer's grade, having gone through a course of tuition in the line of planting, etc.

A young man by name Mr. T. G. Gaudoin has been appointed since the 15th March 1872, instead of Mr. Coxe, as Red Sanders Clerk.

I have travelled throughout all the taluqs placed under my charge, and visiting very many times all the Railway fuel plantations in this and the Bellary Districts and the Railway fuel-reserves.

SECTION II.

A. RESERVED FORESTS AND CONTEMPLATED OPERATIONS.—None.

B. FUEL-RESERVE AND CONTEMPLATED OPERATIONS.

Balapully Railway Fuel-reserve.—No. 1 has had a great deal of my attention during the year. Two watchmen have been employed throughout to watch that no felling takes place in

it and cattle trespassing within the precincts of our aloe-fence, to which much damage has been done by the depredations of wild boars by feeding upon them, and must be repaired. A nursery has been kept up by the watchmen for the purpose of filling up gaps or breaks. I am glad to be able to speak most favourably upon the rapid growth by the density since the preservation took place, and which has cost Rupees 144 for two watchmen at Rupees 6 each per mensem.

No. II. plot under the same name is a proposed reserve, which from not having been handed over to our department by the Collectorate my supervision is nil. Rupees 692-4-0, by a Cheque No. $\frac{3}{15}$, dated 22nd April 1871, in favour of Mr. C. G. Master, the then Collector of the district, was issued in liquidation of the claims attached to the land by Kistnamah Naidoo, with a view of preparing the Transfer Deed of Conveyance for the same, and who had a lease for that portion of the forest-land ; but I am ignorant as to the reasons for the non-settlement and being put in possession of our requirement. If I am not misinformed, the date of the lease has long run out now.

Sullakuntahchanoo Railway Fuel-reserve.—Has been wholly surrounded by the ditch and aloe-fence that was under completion during my last report, and paid for. Already the change for the better is quite perceptible at first glance, for the trees have become so closely knitted together that in some places ingress and egress are very difficult. On this reserve also, as at Balapully, two watchmen have been engaged regularly on a monthly salary to prevent any clandestine felling, etc., and a nursery kept up for the purpose already alluded to. Fire-traces are being made on both these reserves not only to prevent the sparks from the Railway engine igniting the dry hill-grass, but also the annual fires which endangers the whole area. The cost has been Rupees 594-10-11 in all, being Rupees 426-10-11 for fencing and ditching and Rupees 168 for two watchmen and a gardener at Rupees 6 each per mensem ; the latter was employed since December 1871.

Yerragoontlacottah Railway Fuel-reserve.—The handing over of which has been from some cause or other indefinitely postponed.

Gathalla and Nukanapully Railway Fuel-reserve.—Deserves the same remark attached to the preceding reserve. My communication to the Revenue authorities on the subject of these three reserves are manifold and voluminous ; more because the very great importance that must be attached to this portion of my charge to guard against in future years a falling off in the continual supply for locomotive purposes on the Railway. If the Revenue authorities fail to negotiate and settle the knotty points of objections raised by ryots to the forest-lands in their neighbourhood that are wanted for us for the Railway consumption under the head of communal and grazing rights, I am afraid we will be shortly quite crippled to do anything towards alleviating the difficulties arising therefrom to the Railway Company. The forests are, as each day passes over, becoming far removed, so much so that they are already at the brow of the hills in the Pullumpett Taluq, which must be considered the heart and centre, or provincial mart of the North-Western Line of Railway in this commodity. I am not at all an advocate for artificial forests, or rather re-production, to say that the plantations will pay and suffice for the demands chiefly in a drought-stricken district like Cuddapah and the Bellary Districts, where water is a desideratum throughout one-half of the year and more, though I am endeavouring my best to do as much as I possibly can, with this object in view, by giving a great deal of my time and attention to the plantation-operations. As I have already said, plantations are not likely to be remunerative and suffice for the consumption, but, on the other hand, should large tracts of forest-lands be reserved and preserved for this kind of work, the expenditure thereon will be comparatively very small, the income or revenue in due course very large, with a plentiful supply therefrom.

It has cost Rupees 37 for travelling by rail for visiting the several Railway Fuel Plantations and reserves, which, when added to the other expenditures on the reserves, removal of creepers, etc., together with fencing and ditching of them, amounts to Rupees 1,494-12-5.

C. PLANTATIONS AND CONTEMPLATED OPERATIONS.

8. *Ooperapully Railway Fuel Plantation.*—For this period 10,231 plants were put out of the following species :—Albizzia Lebbek, Muddy, Red Sanders, Melia Azadirachta, and wild Gooseberry. 2,175 casuals re-placed by Melia Azadirachta. 151 nursery-beds prepared and sown with the seeds of Muddy, Red Sanders, Innamuddy, Melia Azadirachta, Albizzia Lebbek, Ellama, Cassia florida, Inga Saman, Casuarina equestifolia, and winged seed from Ooty. 7,546 pits excavated. 881½ chains channelling sown with the seeds of the Acacia amara, Albizzia Lebbek, Melia Azadirachta, and Acacia Arabica, and the casuals that occurred were 5,021 of the following species :—Melia Azadirachta, Albizzia Lebbek, Cassia florida, Gooseberry, Tandra, Chloroxylon Swietenia, Inga Saman, Pithicolobium dulce, Muddy, and Acacia Arabica. 1,111 pits were sown with seeds of different species, 11 of which were of the Green Heart seed ; the latter has not germinated, though very much care was taken of them by constant watering, etc. The loss of casuals were chiefly in the Melia Azadirachta and Albizzia kind, because the greatest quantity in these descriptions were sown. 59 acres of land adjoining No. 1 Plot, divided by the public road, was transferred to our department, which makes the total acreage 105 acres here. The land was delivered rather late in the season, so that much could not be done in the planting line, yet it has been wholly channelled and fenced off for the coming planting and sowing months.

	RS.	A.	P.
Plantation working charges, including pitting and channelling	2,373	10	6
Fencing	354	6	0
Hired establishment	129	9	7
Total...	2,857	10	1

Codoor Red Sander Plantation.—The operations here were the putting down of young plants between the established trees in pits and channels to decrease the distances, sowing of Red Sanders seeds in pits and channels, sowing seeds of Teak, Yeggi, and Red Sanders in nursery-beds, and watering them, besides watering all the young plants in channels and pits as also the younger plants of the previous year's germination. The Green Heart seeds failed to germinate, though much attention was paid to them.

	RS.	A.	P.
Plantation working charges, including pitting and channelling...	317	5	9
Hired establishment	168	0	0
Total...	485	5	9

Reddipully Railway Fuel Plantation.—Seven hundred and thirty-six pits excavated. 3,936¼ chains of channelling sown with the seeds of Acacia amara, Albizzia Lebbek, Melia Azadirachta, Acacia Arabica, Cassia florida, and Tamarindus Indica. 5,869 plants put out as follows :—Albizzia Lebbek, Melia Azadirachta, Cassia florida, Eugenia Jambolana, Muddy, Cananga Odorata, Casuarina equestifolia, Inga Saman, and Poinciana Regia ; 12½ chains sown with Palmirah seeds in the fencing ditch ; 9 pits sown with Green Heart seed, and 3 with Muddy. 1,348 casuals occurred in plants in pits and were re-placed. 210 nursery-beds prepared and sown with Cassia florida, Innamuddy, Albizzia Lebbek, Melia Azadirachta, Inga Saman, Acacia amara, Muddy, Tectona grandis, and winged seeds from Ooty. 424 acres of land were added to the plot of 500 acres by transfer through the Revenue authorities which increases the total acreage to 924 acres in all. Here also some few Green Heart seeds were sown and looked after with care, which failed to germinate as yet. The casualties that occurred were chiefly in the Melia Azadirachta, Acacia Arabica, and Albizzia Lebbek, as these kinds were more plentifully planted out and sown in trenches.

	RS.	A.	P.
Plantation working charges, including pitting and channelling	3,387	15	6
Fencing	73	8	0
Hired establishment	179	0	0
Total...	3,640	7	6

Pullumpett Railway Fuel Plantation.—665 plants put out of the following kinds :—Albizzia Lebbek, Eugenia Jambolana, Casuarina equestifolia, Melia Azadirachta, and Cassia florida. 65 casuals among the Albizzia Lebbek, Casuarina equestifolia, and Melia Azadirachta. 23 chains channelling sown with Cassia florida seed. Two acres of land ploughed and sown with Acacia Arabica seed. 700 pits excavated. Eight pits sown with the Green Heart seed. 127 nursery-beds prepared and sown with Innamuddy, Melia Azadirachta, Cassia florida, Albizzia Lebbek, Muddy, Inga Saman, Casuarina equestifolia, Tectona grandis, and winged seeds from Ooty. 402 acres of land being transferred to our department in two different plots divided by the Railway line, one of which and the largest has been fenced and a great portion channelled off, but just too late for last year's operations. Small planting had been gone through by pitting, and the nurseries got up to be ready for next season. The Green Heart seeds sent up signally failed to germinate. The greater portion of plants put out are the Melia Azadirachta and Albizzia Lebbek.

	Rs.	A.	P.
Plantation working charges, including pitting and channelling	630	6	6
Fencing	669	6	0
Hired establishment	12	0	0
Total...	1,311	12	6

Camalapoor Railway Fuel Plantation.—Four new wells excavated. 12,550 pits sown with Albizzia Lebbek seeds. 37,030 pits excavated. 153 nursery-beds prepared and sown with the seeds of Albizzia Lebbek and Melia Azadirachta. 1,325 casuals re-placed. 14,910 plants put out of the Melia Azadirachta, Casuarina equestifolia, and Albizzia Lebbek. 5,461 casuals occurred in the plants put out in pits. 1,325 casuals re-placed by Casuarina equestifolia and Melia Azadirachta plants. 2,340½ chains sown with the Acacia Arabica and Melia Azadirachta seeds. Melia Azadirachta and Albizzia Lebbek were the trees chiefly put out; but a good deal of the Acacia amara seeds were sown in the channels with Acacia Arabica and Albizzia Lebbek also :—

	Rs.
Plantation working charges, including pitting and channelling, rail charges, etc.	1,527
Fixed establishment	378
Total...	1,905

Ghooty Railway Fuel Plantation.—15,089 plants put out of the following Casuarina equestifolia, Melia Azadirachta, and Albizzia Lebbek ; 8,070 casuals re-placed in the following species :—Albizzia Lebbek and Melia Azadirachta. 1,915 casuals occurred among the Melia Azadirachta, Albizzia Lebbek, Acacia Arabica, and Cassia florida. 5,183½ chains channelling was sown with the seeds of Melia Azadirachta, Acacia Arabica, Tamarindus Indica, and Albizzia Lebbek ; three new wells excavated. 24,240 pits excavated. 275 chains fencing repaired. 152 nursery-beds prepared and sown with the Albizzia Lebbek, Cassia florida, and Melia Azadirachta seeds.

Here also as at Camalapoor Melia Azadirachta and Albizzia Lebbek were transplanted chiefly from the nurseries, while in the channelling the seeds of the Tamarindus Indica, Acacia amara, Albizzia Lebbek, Acacia Arabica, and Melia Azadirachta were plentifully sown :—

	Rs.	A.	P.
Plantation working charges, including pitting and channelling, rail charges, etc.	1,161	12	0
Fixed establishment	378	0	0
Total...	1,539	12	0

Large nurseries on every one of these plantations are being kept up with a view of re-placing casuals as they occur, and transplanting during the time the season permits such work to be carried on. Not only casuals that have occurred from the planting of the last season had been re-placed, but also those from the preceding years also. The rains though they were heavy and frequent during the past monsoons in the Pullumpett Taluq, doing much good at the time, yet in the Camalapoor and Ghooty side they signally failed ; but the present hot season tells much on all the plantations, since our usual small preliminary showers are tantalizing us at the present time, and already much of our younger plants have succumbed to the heat, while some of the older also have died away, and the remainder looking parched up. Melia Azadirachta, Acacia amara, Acacia Arabica, and Tamarindus Indica have been plentifully used in the channelling of the whole four plantations, viz., Ooperapully, Reddipully, Camalapoor, and Ghooty. Many other species also have been used but not to such extents. On the whole, considering the heat now, the plantations are weathering it out remarkably. The desideratum is water on all our plantations. Camalapoor and Ghooty were fast failing in their spring-resources, although twice the previous depth had been excavated in the wells, to which, when the bad soil is added, proves disastrous. Ooperapully, Reddipully, and Pullumpett have to trust to the good nature of ryots who own wells adjacent to them by allowing us to draw from, for watering our nurseries and the younger plants ; when I say adjacent, I mean the nearest and situated at a distance not so convenient as we would wish.

SECTION III.

License and Voucher Forests.—All the forests in my Range, in all timbers, etc., are worked under this system, with the exception of the engine fire-wood, Red Sanders roots and stumps as usual ; and the collection of a small quantity of Pterocarpus santalinus posts taken on hand late this year experimentally, to see what it would realize in the market by auction. I am sanguine the contemplation will amply re-pay the trouble and cost, which, if it does, the undertaking will be enlarged for the ensuing year.

Timber supplied to Public Works Department.—Nil.

Timbers, Fire-wood, Bamboos, etc., removed by Wood-cutters on Licenses.—*Vide* Statement A., Head II., or Statement E., which includes the sale of Red Sanders roots and stumps, engine fire-wood, confiscated timbers, and jungle-wood depôt timbers.

Engine Fuel.—22,881,140½ lbs. or 10,214 tons, 1,780½ lbs. was taken by the Railway Company, which realized Rupees 22,881-2-3, exceeding last year's receipt by about Rs. 5,000 and odd under this head.

Quantity of Timber of all Descriptions felled and stored in Depôts.—During the year 466,400 lbs. Red Sanders roots and stumps were collected, of which none was got in at the Balapully depôt, at a cost of Rupees 1,342-1-10, at Rupees 4-9-8 per 64 maunds ; and 300 Pterocarpus santalinus posts, *i.e.*, 100, 1st class, and 200, 2nd class, which cost the department Rupees 200, *vide* Statement B.

Timbers of all Descriptions sold to Merchants from Depôts by Tender or Auction, and the Quantity to be accounted for.—In last year's timber account there was a balance of 2,571 cubic feet and ¼ inch remaining on hand, and still remains so, as no sales took place in that particular wood, at Rupees 1-4-0 per foot ; 970 cubic feet of jungle-wood, at Rupee 1 per foot, was on hand, which realized only Rupees 177 by public auction. As it was, I consider it brought in a good price, from the timbers having deteriorated very much from exposure to the inclemency of the weather for such a lengthened period ; the difference occasioned amounts to Rupees 793, which has been placed to the "Profit and Loss" account. This sum will appear large at the valuation rate ; but the actual loss was only Rupees 308, as we only paid Rupees 485 for the above quantity of 970 cubic feet which, when doubled, is our valuation rate. The purchaser of this wood afterwards found out that it would cost him more for the carriage than it would bring in all by his disposal ; and has left a good quantity behind, not

caring any further about them ; but he has paid up his due to the department into the treasury. A quantity of 2,016,000 lbs. Red Sander roots and stumps was sold to Messrs. Dymes & Co. from the Balapully and Codoor depôts, realizing Rupees 16,129-11-0. There is still in depôt 6,62,010 lbs. for sale hereafter, to which will be added a further collection. *Vide* Statements C. and A., Head I.

Confiscations.—The amount realized by sales of confiscated timbers has been Rupees 543-2-0. *Vide* Statement A., Head VII.

Measures taken for Extending and Improving the Forests.—The usual precaution has been specially attended to with reference to the clearing of the noxious creepers from the valuable timber trees of the higher rates of seigniorage at a very small expenditure, amounting to about Rupees 4-8-0, while a great deal was executed by the Peons travelling about with me and those of the other tannahs during their tours or beats into the jungles.

Elephants and other Cattle and Carts employed in the Forests and their Work.—Only eleven carts and eight coolies were employed for removal from the forests the confiscated timbers during this period, at a cost of Rupees 6-12-0.

Free Felling.—The quantity of timber, fire-wood, and bamboos taken free by ryots in each taluq is shown separately. It will be observed that nothing is shown against the Pullumpett Taluq. I cannot even conclude that Statement F. in question is quite true : much more has been taken and the ryot, generally speaking, has satisfied himself by taking his full requirement with and without the necessary authority. The valuation of the materials in the statement is estimated to be about Rupees 575. The Royachoty Taluq though it does not belong to the taluqs of my Range, yet my range forests have been indented upon by the ryots of that taluq for free felling, perhaps from my jungles being adjacent to these villages, and hence more convenient. *Vide* Statement F.

Any valuable rare or new Plants.—None.

Forest-products.—None. My views on this subject having been placed before the Collector of the district and the collection of these commodities not yet being sanctioned, nothing has been done towards it.

Outstanding Advances.—Amounts to Rupees 375-15-6 remaining in the hands of my Overseer, advanced to him for the operations of the Ooperapully, Codoor, Reddipully, Pullumpett, and Camalapoor Railway Fuel Plantations in the Cuddapah and Ghooty in the Bellary District, divided as follows :—The Overseer being answerable for Rupees 76-11-6, including the balance for Ghooty, Rupees 3-5-4 ; Rupees 100 in the hands of the contractor for building Red Wood Depôt fence wall ; Rupees 109-4-0, to be made good by the Red Sanders Post Contractor ; Rupees 60 advanced to Mr. E. W. Coxe, Overseer, Salem District ; and Rupees 30 belonging to the Permanent Advance Fund.

Trespass or Damages committed in the Nurseries, Plantations, or Forests and the Results of criminal Prosecutions.—The criminal prosecutions for the year has been moderate under all the heads, but in the majority of the cases conviction was obtained. The only difficulty being that the magistracy urge upon us the necessity of having direct or immediate evidence in each instance, *i.e.*, the offenders must be caught in the act of felling the trees in the forest without a license or arrested while carting within forest limits. This is rather a difficulty in our way and detriment to the establishment, while, on the other hand, acts quite the opposite to those who are inclined to be dishonest by clandestine felling : especially, when we come to consider the multitude of roads through which they can pass out while our Tannah Peon is watching the principal outlet, perhaps in quite a different direction, he may some time after get information of the affair, when to act upon it proves futile. I must reiterate that the annual fires have in no way decreased, with the idea the ryots have of having made provisions for a plentiful supply of hill-grass for their cattle during the forthcoming season thereby. Last and not least, I may recount the depredations made upon the Ellama, Red Sanders, and Yapee trees by hewing down the branches for feed of cattle by the cowherds that migrate to these hills

during the hot season from the adjoining districts with very large flocks of cattle and those of the adjacent villages of this district also, where they remain penned up till the rains have set in on the plains, and has helped to bring up the new grass. In some spots the damages committed appears most disheartening, amounting to wanton waste, to guard against which all our vigilance is of no avail from the limited establishment we have to work with. Cattle-trespass on the plantations has been summarily disposed of, by the pound fine having been made to bear on each case since no damages to trees or fence had been caused thereby. The results in cases have been 60, and number of persons 21 per cent. conviction.

Having well considered and watched the working of these jungles for these many years, I cannot at all advocate the introduction of the departmental system, till the whole district is placed under the supervision or government of the special department. The jungles under district conservancy lies contiguous to my range, and consists chiefly of the most valuable Guvulchervu range of hills, and those in the other limits of the Royachoty, Cuddapah, and Voilpad Taluqs ; that no sooner departmental agency is introduced we must calculate upon a thorough down-fall in the revenue, and thus to induce all the wood-cutters and merchants to flock to the other unwatched portions of the forests. As it is, the Revenue Department having no special establishment, much of the forests are being denuded from want of efficient supervision over the wood-cutters, especially in that most important range called the Guvulchervu or Palcondah hills, which is the only timber-supplying jungles adjacent to the villages south of the hills and north and south of the Railway line, and where timber is a very great desideratum. How often have I noticed and dwelt upon the subject of the Red Sanders saplings split up, and even the posts being brought into the town of Cuddapah for fire-wood purposes, and no prohibition has been effectually made. The residents of Cuddapah are willing to pay wood-sellers an Anna more for each head-load of this kind of wood than for any other, on account of its being a heavy description, giving better or more heat, and burning longer. Here in the Pullumpett Taluq this commodity (roots and stumps) brought in a revenue to Government during last sale of Rupees 16,129 and odd. At the present rate of destruction to this most valuable dye-wood, in a very few years hence it is anticipated that the Guvulchervu range of hills will be extinct in this particular kind of produce, for I am certain that the re-production is not equal to the consumption.

As I have already stated, for departmental felling, of course at a large outlay for the up-keep of extra establishment under the present arrangement noticed, we force the wood-cutters and merchants to have recourse to the nearest forests, where they can get their requirements much cheaper, and in most cases by clandestine removal without any other cost, except the felling. Taking all this into consideration I could not conscientiously recommend the purposed change of system till the whole become one uniform general department.

I could not sub-divide under " Conservancy and Working, Head I, Timber Expenses" into, 1, cost of felling, and, 2, cost of conveyance to depôt, for the following reasons : that having taken the lowest tender for the supply of both Red Sanders posts and Red Sanders roots and stumps to be delivered at the depôt, including felling and carting and not according to a particular rate for felling, and separate for carting *e.i.*, the posts, 1st class, at the rate of 12 Annas each, and 2nd class, 10 Annas ; 12 posts being equal to a cart-load of 20 cubic feet.

The rate of valuation in Statement B shows double the amount actually paid for them, and they will not be disposed of till that amount or more can be had, which we have every hopes of. Should the undertaking prove remunerative, I shall extend my operations in this line which will go towards making up for some of the deficiencies likely to accrue from private enterprise about to be set up in opposition, and over which we have no control under the existing arrangements of our department, much to be regretted, and regarding which I notice under the head of general remarks.

The Red Sanders roots and stumps supplied to my depôts is at the rate of Rupees 4-9-8 per 1,600 lbs., while the valuation rate is Rupees 8 per 1,000 lbs., as per Statement B. During last sale the realization was Rupees 8-0-0$\frac{3}{5}$ per 1,000 lbs., *vide* Statement C, column 4.

SECTION IV.

Yields of Forests.

Amount of Timber, etc., etc., taken from the Forests during the year.

Timbers.			Fire-wood.			Bamboos.			Charcoal.			Barks of Wood.			Palmirah.			Red Sanders Roots and Stumps.		
Departmentally.	On License.	Free.	Departmentally.	On License.	Free.	Departmentally.	On License.	Free.	Departmentally.	On License.	Free.	Departmentally.	On License.	Free.	Departmentally.	On License.	Free.	Departmentally.	On License.	Free.
500 Cubic feet.	1,11,020 Cubic feet.	7,280 Cubic feet.	,,	11,000 tons, 2,140$\frac{8}{11}$ lbs.	93 tons, 1,630 lbs.	,,	1,410 cart-loads.	2 cart-loads.	,,	9$\frac{2}{11}$ tons.	,,	,,	387 cart-loads or 107$\frac{11}{11}$ tons	,,	,,	15 No.	,,	208$\frac{3}{11}$ tons.	,,	,,

The fire-wood includes the quantity taken for Railway fuel purposes as well as on licenses. The only difference in the system being that the Railway Company pay into the district treasury 1 Rupee on every 1,000 lbs., supplied them by the contractor. This method saves the department a great deal of trouble in supervision besides closing all gaps for dishonesty on the part of the contractors and our own Peons: as no checking by them is required as to the quantities, with the exception that they do not cut the woods of the higher rates of seigniorage for such fuel purposes.

SECTION V.

Financial Results.

	Rs.	A.	P.	Rs.	A.	P.
Receipts for the year 1871-72.....				55,330	1	3
Expenditure.						
Conservancy and working	14,833	1	2			
Establishment	7,610	10	4			
Contingencies	141	3	6			
				22,584	15	0
Vide Statement A.						
Net profit to Government.....				32,745	2	3
Deduct decrease in Stock.....				13,623	14	5
Net Profit...				19,121	3	10

My budget-estimate for 1871-72 was Rupees 50,000, and expenditure under the head of Conservancy and Working Rupees 18,000, and establishment Rupees 9,160, making in all Rupees 27,160; while the actual receipts were Rupees 55,330-1-3 and expenditure Rupees 14,833-1-2 and Rupees 7,751-13-10, respectively, and total expenditure Rupees 22,584-15-0, instead of Rupees 23,840, as was anticipated; thus the surplus to Government credit has been Rupees 32,745-2-3 in lieu of my estimation beforehand, Rupees 23,840. The increase in receipts may be attributed respectively to the amount realized by sale of a quantity of my collection of Red Sanders roots and stumps to Messrs. Dymes & Co., and the less in expenditure owing to the transfer of

Mr. Brougham as Acting Assistant Conservator to Salem from an Overseer on Rs. 100 per mensem ; this saving, together with the Rupees 28 per mensem for the Kondapurum plantation, which establishment was not entertained, as the idea is about being abandoned, and lastly the economy of expenditure on the several plantations gives these good results. The charge of the Ghooty Railway Fuel Plantation in the Bellary District also finds its payment from the revenue of the Cuddapah District, while Bellary does not contribute an iota towards it.

Result for 1870-71 was as follows :—

Budget-estimate.			*Actuals.*					
		RS.				RS.	A.	P.
Receipts		50,000	Receipts...			46,301	9	10
Conservancy and Working.	14,000		Conservancy and Working ...	16,085	9 8			
Establishment	9,160		Establishment.	8,494	13 6			
		23,160				24,580	7	2
		26,840				21,721	2	8

SECTION VI.

General Remarks.—I cannot guarantee much for the collections of 1872-73, as I believe the Shrotriemdars of Strinivassapuram, Kottapully Agraharam, between Balapully and Codoor, intend giving up their forest-lands to the contractor who now supplies the Locomotive Department from our jungles ; and he will gladly avail himself of this opportunity, since he will save himself the Rupee the Company deduct from his account on every 1,000 lbs. as seigniorage for our department. To prevent encroachment by these Shrotriemdars and their making use of our forests for their benefit, I have employed two watchmen to supervise this portion at the rate of Rupees 6 per mensem each, which cost Rupees 22-5-6 in all. In course of time I apprehend that other Shrotriemdars, similarly situated in this and other taluqs, will follow the example of the above-mentioned place, and thus quite cut off our sources of revenue for a time, because their forest-lands are not very extensive, and will soon become exhausted.

The addition to two plantations and the taking up of a new plot that was under consideration and made mention of in my report for 1870-71, has been concluded, but the transfer of forest, lands for Railway fuel-reserves remain undecided, particulars of which I have given under their proper heads of plantations and reserves.

The Codoor forest bungalow, at the estimated cost of Rupees 213, was repaired, and to guard against accidental fires, etc., a wall is being raised around the Codoor Red Sanders depôt and a imilar project is under contemplation for Balapully depôt also ; the wall is to be about 5 feet with coping of chunam-work, while the wall is built of rubble stone and mud. The expenditure would have been still lower only owing to the plantation operations having increased, the taking up of new plots as additions to the plantations, fencing, and channelling them, together with the other incidental expenses enumerated in this paragraph.

Collection is being made for sales hereafter in the Red Sanders roots and stumps to be added to the stock on hand of about 6,62,010 lbs. I have also made a collection of some 100 1st-class Red Sanders posts and 200 2nd-class ones.

Health of Establishment and Conduct.—I am glad to say, on the whole, has been pretty fair ; one or two of my Peons have had fever which necessitated their being indulged with leave of absence to recruit their health ; the death of one Peon occurred during the year. The fever was not of so severe a type as last season.

I have no complaints whatever to bring forward against my staff. All have worked cheerfully and conducted their several duties to my entire satisfaction.

I have the honour to be,
Sir,
Your most obedient servant,
(Signed) H. H. YARDE,
Assistant Conservator Cuddapah, etc., Forests.

STATEMENT A.

CUDDAPAH DISTRICT.

Annual Summary of Revenue and the Expenditure for the official year 1871-72.

Classification.	Amount.	Total.	Remarks.
Receipts.	RS. A. P.	RS. A. P.	
I.—Sale of timber at depôts	16,306 11 0	.....	Including Red Sanders, roots and stumps.
Do. value of timber supplied to P. W. Department...	.....	.....	
II.—Sale of timber removed by purchasers	38,480 4 3	.....	Including Railway Fuel.
III.—Duty on foreign timber	.....	.....	
IV.—Permit fees...	.....	.....	
V.—Grazing dues	.....	.....	
VI.—Sales of fruits, etc.	.....	.....	
VII.—Sale of confiscated timber...	543 2 0	.....	
VIII.—Fines and forfeitures...	.....	.....	
IX.—Miscellaneous	.....	.....	
Total Receipts...	.....	55,330 1 3	
Conservancy and Working.			
I.—Timber expenses for felling, etc. ...	2,078 11 11	.....	
Carriage of confiscated timber	6 12 0	.....	
II.—Purchases of tools and plants	99 12 0	.....	No cash transaction was received from the Stores and a mere voucher arrangement.
III.—Feed and keep of cattle	.....	.....	
IV.—Rent of leased forests	.....	.....	
V.—Charges in collecting revenue of grass, etc.	.....	.....	
VI.—Plantations...	10,940 0 10	.....	
Reserved tract for Railway Fuel ...	692 4 0	.....	
VII.—Forest work, watching of reserve, fencing, etc.	802 8 5	.....	The plot has not been yet made over for a Railway Fuel-reserve.
VIII.—Forest survey	.....	.....	
IX.—Experiments on timber	.....	.....	
Amount refunded	.....	.....	
X.—Communications and buildings	213 0 0	.....	
Total Conservancy and Working...	14,833 1 2	.....	
Establishments.			
I.—Salaries	6,710 10 4	.....	
II.—Allowances	900 0 0	.....	
III.—Contingencies	141 3 6	.....	
Total Establishments...	7,751 13 10	.....	
Total of Expenditure...	.....	22,584 15 0	
	.....	.....	

STATEMENT B.

CUDDAPAH DISTRICT.

Showing detail departmental Felling for the official year 1871-72.

Division of Range.	Description of Timber and other Forest-produce.	Number of Cubic Feet.	Number of Maunds.	Rate of Valuation per Cubic Foot.	Rate of Valuation per Maund.	Total Valuation.
1	2	3	4	5	6	7
Cuddapah.	Red Sanders roots and stumps.	.....	18,656	.....	At Rs. 8 per 40 Maunds.	RS. A. P. 3,731 9 5
	Do. omitted last year.	.....	4,000 1/2/5	.....	.....	869 0 8
	Do. posts, 1st class.	100=166 2/3 C. ft.	.....	0 14 4 1/5	.....	150 0 0
	Do. 2nd do. ...	200=333 1/3 ,,	.....	0 12 0	.....	250 0 0
	Total...	.....	.....	.....	.....	5,000 10 1

STATEMENT C.

CUDDAPAH DISTRICT.

Showing detail of Sales from each Depôt for the official year 1871-72.

Name of Depôt.	Description of Timber or other Forest-produce; Number of Cubic Feet or Maunds sold and Rate of Valuation per Cubic Foot or Maund.	Total Valuation.	Total Amount actually realized.	Difference between Columns 3 and 4.	Explanation of Difference.
1	2	3	4	5	6
Codoor ...	Red Sanders roots and stumps... ... ... 67,051 1/5	RS. A. P.	RS. A. P.	RS. A. P.	
Balapulli...	Do. do. 13,588 4/5				
	at Rs. 8 per 40 Mds... 80,640	16,128 0 0	16,129 11 0	1 11 0	Increase.
Codoor ...	Jungle-wood, 970 Cubic feet...	970 0 0	177 0 0	793 0 0	Decrease.
	Total...	17,098 0 0	16,306 11 0		
			Total showing aggregate decrease...	791 5 0	

STATEMENT D.

CUDDAPAH DISTRICT.

Statement showing the Stock of Timbers, etc., at the Commencement and close of the official year 1871-72.

Description of Timber or Forest-produce.	No. of Cubic Feet.	No. of Maunds.	Rate per Cubic Foot or Maund.	Total Valuation.
1	2	3	4	5
	FT. IN.			RS. A. P.
Remaining on Hand from last Year's Stock on 1st April 1871.				
Thumbah...	2,571 ¾	.....	At Rs. 1-4-0 per cubic foot.	3,213 13 3
Jungle-wood	970 0	.....	Do. 1-0-0 do.	970 0 0
Red Sanders roots and stumps ...	...	84,464 9/10	.....	18,350 8 6
by clerical error in last year's account currents.				
Total...	3,541 ¾	84,464 9/10	.....	22,534 5 9

Particulars of Balance or Stock in Hand on the 1st April 1872

26,480½ maunds Red Sanders roots and stumps, at Rs. 8-0-0 per 40 maunds	5,296 10 1		
2,571 feet ¾ inch Thumbah wood, at Rs. 1-4-0 per cubic foot.	3,213 13 3		
100 posts = 166⅔ cubic feet Red Sanders posts, 1st class, at Rs. 0-14-4½ per cubic foot	150 0 0		
200 posts = 333½ do. do. 2nd class, at Rs. 0-12-0 per cubic foot	250 0 0		
		8,910 7 4	
		31,444 13 1	
Add total valuation of timber, etc., felled during the year as per column 7, Statement B.		5,000 10 1	
Grand Total...		36,445 7 2	
Deduct total valuation of timbers, etc., sold during the year as per column 3, Statement D.	17,098 0 0		
Do. decrease in value by reduction of rates...	1,526 8 6	18,624 8 6	
		17,820 14 8	
Compare remainder with total under column 5		31,444 13 1	
Decrease in Stock...		13,623 14 5	

STATEMENT E.

CUDDAPAH DISTRICT.

Showing the Quantity of Timbers, etc., disposed of under the License and Voucher System, for the official year 1871-72.

Description of Timber or Forest-produce.		Number of Cubic Feet.	Number of Maunds.	Rate of Seigniorage or Sale per Cubic Foot or Maund.	Total Receipts under each Head.	Remarks.
Wrought.	Unwrought.					
1		2	3	4	5	6
				RS. A. P.	RS. A. P.	
Yagee	.....	8 cart-loads, or 160 C. ft.	.....	12 0 0 per cart-load of 20 C. ft.	96 0 0	
.....	Yagee ...	26 ,, 520 ,,	.....	6 0 0 Do. ...	156 0 0	
Innamuddy ...	.....	61 ,, 1,220 ,,	.....	10 0 0 Do. ...	610 0 0	
.....	Innamuddy..	424 ,, 8,480 ,,	.....	5 0 0 Do. ...	2,120 0 0	
Satin-wood ...	.....	34 ,, 680 ,,	.....	8 0 0 Do. ...	272 0 0	
.....	Satin-wood...	292 ,, 5,840 ,,	.....	4 0 0 Do. ...	1,168 0 0	
Palu	.....	58 ,, 1,160 ,,	.....	6 0 0 Do. ...	348 0 0	
.....	Palu	272 ,, 5,440 ,,	.....	3 0 0 Do. ...	816 0 0	
Ellama	.....	398 ,, 7,960 ,,	.....	4 0 0 Do. ...	1,592 0 0	
.....	Ellama ...	533 ,, 10,660 ,,	.....	2 0 0 Do. ...	1,066 0 0	
Jungle-wood ...	.....	455 ,, 9,100 ,,	.....	2 0 0 Do. ...	910 0 0	
.....	Jungle-wood.	2,990 ,, 59,800 ,,	.....	1 0 0 Do. ...	2,990 0 0	
Fire-wood ...	.....	.....	786 5/8 tons	1 0 0 per cart-load of 1,000 lbs.	1,761 0 0	
Charcoal... ...	.....	.....	864 parahs or 54 cart-loads, or 864 Maunds.	0 1 0 per parah	54 0 0	
Bamboos... ...	.....	1,224 bandies	.....	0 8 0 per cart-load	612 0 0	
Do.	.....	185 1/4 ,, or 743 ass-loads ...	.....	0 2 0 per ass-load	92 14 0	
Do.	.....	1/2 bandy or 4 head-loads ...	.....	0 1 0 per head-load	0 4 0	
Somee bark ...	.....	.....	259 cart-loads or 6,475 Maunds.	3 0 0 per cart-load	777 0 0	
Thunnah bark...	.....	.....	128 cart-loads or 3,200 Maunds.	1 0 0 per cart-load	128 0 0	
Palmirah ...	.....	.....	15 trees	2 0 0 each	30 0 0	
Engine Fire-wood.	.....	.....	Tons. 10,214, lbs. 1,780 1/2, or Mds. 915,245, lbs. 15 5/8.	1 0 0 per 1,000 lbs. or 40 Mds.	22,881 2 3	
				Total...	38,480 4 3	

STATEMENT F.

CUDDAPAH DISTRICT.

Showing the Quantity of Felling for the official year 1871-72.

Taluqs.	Timber.	Fire-wood.	Bamboos.	Remarks.	
	FEET.	LBS.	BANDIES.		
Pullumpett ...	.....	.....	.....	*Valuation.*	
Sidhout ...	3,280	28,000	2	7,280 cubic feet timber, at Rs. 1 per 20 cubic feet	RS. 364
Budwail ...	2,420	182,000	.....	8,400 Maunds fire-wood, at Rs. 1 per 40 maunds.	210
Royachoty ...	360	.....	.....	Two bandy-loads of bamboos, at Rs. 0-8-0 each	1
Proddatore ...	1,220	.....	.....	Total...	575
Total...	7,280	2,10,000 or Mds. 8,400	2		

CAMP AT CODOOR,
13*th May* 1872.

(Signed) H. H. YARDE,
Asst. Conservator of Cuddapah, etc., Forests.

APPENDIX D.

OFFICE OF ASSISTANT CONSERVATOR OF FORESTS,
RANEPETT, 1*st April* 1872.

From

MR. T. SHEFFIELD,
Assistant Conservator of Forests, North Arcot,

To

MAJOR R. H. BEDDOME,
Conservator of Forests:

SIR,—I have the honour to submit the Administration Report of North Arcot Forests for the official year 1871-72.

SECTION I.

Inspection Tours of the Officer in Charge.—During the year under report I have inspected the whole of the Javadi hill forest in this district, the whole of that portion of the Chendragherry forests under charge of the Forest Department, the plantations, reserves, and tannah stations. The plantations I have visited and inspected two and three times a month, and have been absent from head-quarters 162 days.

SECTION II.

A.—RESERVES.

We have no reserved forests in this district, but we have stopped the issue of licenses for felling the reserved kinds of woods, nineteen in number, and have taken to fell them departmentally, form depôts, and sell by auction. During the past year we felled and prepared 759$\frac{8}{16}$ maunds of Sandalwood on the Javadi hills, felled and prepared 481 cubic feet of Redwood posts, 35 cubic feet of Yellama logs, and collected 12,791$\frac{7}{16}$ maunds of Redwood roots and stumps in the Chendragherry forests.

This is not a great deal of work; but as it was the first year of trial, and we had to make a market, it was necessary to be careful in not felling more than we could find purchasers for. In the year now beginning we shall fell a few logs of different kinds of wood for the depôts at Vellore and Santavasal, and about 500 maunds of Sandalwood for auction at Vellore; for Kurcumbadi we shall fell about 1,000 cubic feet of Redwood posts and a few logs of kinds, and possibly collect 8,960 or 13,440 maunds of Redwood roots; but our collection of this is restricted by the state of the Madras market and by the small sum allowed for working charges.

By our closing the forests against the felling of reserved timbers we have lost from 2,000 to 3,000 Rupees revenue, but on the other hand we have saved the forest from a great deal of waste; and our forests have been so much destroyed in supplying the Railway with sleepers some ten or twelve years ago, that there is scarcely a well grown tree of the reserved kinds to be found in them; and it is absolutely necessary to stop felling for some years to come, to give the young trees a chance of growing to timber size.

B.—Fuel Reserves.

Government, in their order, No. 954, dated 30th May 1871, sanctioned the enclosure of six square-miles of forest near Amboor Railway Station, and four square-miles near the village of Mamundoor on the North-West Line. This latter piece has been surveyed by the Revenue Survey Department, and a map of it on a large scale is in preparation. We have enclosed the whole of it with a ditch 4 feet wide and 3 feet deep with a bank on the inner side of the ditch 3 feet high planted with Aloes, except where rocky ground occurred, where we have built a stone-wall 3 feet high, 3 feet broad at bottom, 2 feet at top. Two nurseries of half an acre each in extent have been formed and are both well stocked with young plants; one large well has been sunk.

The expenditure, including demarcation, nurseries, and four miles of the ditch, bank, etc., is Rupees 1,424-1-8, and there is still two miles of the ditch, bank, etc., to be paid for.

The six square-miles at Amboor was marked out, the Jungle felled round the line of survey, demarcation stones put into position, and the survey completed within two miles, when I received orders from the Collector to stop work pending inquiry into some objections made by the villagers living near the reserve to our taking up the land, and up to this time I am not aware that the matter has been settled; but it is important that it should be settled as soon as possible, because should it be decided that we must give up this reserve we must select land in lieu of it; I do not think we can get a block of the same size anywhere else, and we shall most likely have to select two or three pieces in different places or select one piece as large as possible and make up any deficiency by plantations; either alternative will be far more expensive than the original plan.

C.—Plantations.

Statement showing the Height and Girth of twelve Casuarina Trees taken at random from 18,000 *Trees of same age in Trivellum Plantation.*

No	Name of Trees.	Height and Girth on 1st February 1871.		Height and Girth on 15th March 1872.		Increase in the size in 13½ months.		Remarks.
		Height in feet.	Girth in inches.	Height in feet.	Girth in inches.	Increase in Height in feet.	Increase in Girth in inches.	
1	Casuarina	40	18	59	21	19	3	
2	Do.	42	20	61	22	19	2	
3	Do.	42	21	64	24	22	3	
4	Do.	36	22	50	23	14	1	
5	Do.	38	18	54	22	16	4	
6	Do.	37	20	56	24	19	4	
7	Do.	40	22	55	28	15	6	
8	Do.	37	22	49	27	12	5	
9	Do.	47	23	61	28	14	5	
10	Do.	38	16	54	20	13	4	
11	Do.	39	23	54	27	15	4	
12	Do.	38	19	58	23	20	4	

C.—Plantations.

Plantation.	Acreage.	Nature of	Planting charges including pitting and channelling.	Expenditure. Fencing.	Establishment. Permanent.	Establishment. Hired.	Total.	Receipts	No of trees planted out and casualties replaced.	No. of casualties that occurred during the year	No. of trees permanently established	Expenditure from commencement.	Remarks.
Trivellum, situated about 8 miles west of Vellore Station at the junction of the Poiney and Palar river and about a mile from the Railway.	358	Chiefly Casuarina equestifolia but containing also a few Cassia of different species. A Railway Fuel plantation.	Rs. A. P.	Rs. A. P.	Rs A P.	Rs A. P. 1,182 14 5	Rs A P 1,182 14 5	Rupees 88, sale of seed and plants.	39,500	15,000	110,554	Rs. A. P. 7,696 5 2	Although this plantation is planted up we shall have to keep an establishment; many of the young plants will fail and they will have to be re-placed; for three years the plants require watering during the dry season; the plantation must be thinned, pruned, and kept in good order, and to do this will require Rupees 1,000 a year; but at the end of three years the trees will require merely a watching establishment. From 20,000 to 30,000 of the trees are now from 30 to 50 feet high and from 18″ to 30″ in circumference at one foot from the ground and contain half a bandy-load of fuel; these trees are six years old. The average cost per plant, including all expences, is one Anna one-and-a-half Pies nearly.

The following is a Statement of the size of six trees of each year's planting now standing on the Plantation. I have taken two large, two medium, and two of the smallest to be found in each year.

Casuarina equestifolia.	Two largest Plants. Height in feet.	Two largest Plants. Girth in inches.	Two medium Plants. Height in feet.	Two medium Plants. Girth in inches.	Two smallest Plants Height in feet	Two smallest Plants Girth in inches.	Remarks.
Planted in 1866... ...	70	32	50	22	40	18	
	66	33	49	23	47	20	
Do. 1867... ...	53	32	47	22	36	16	
	58	33	49	23	39	18	
Do. 1868... ...	36	22	28	14	19	13	
	37	20	32	17	25	14	

Casuarina equestifolia.	Two largest Plants Height in feet.	Two largest Plants Girth in inches.	Two medium Plants. Height in feet.	Two medium Plants. Girth in inches.	Two smallest Plants. Height in feet.	Two smallest Plants. Girth in inches.	Remarks.
Planted in 1869... ...	30	13	17	8	10	6	
	28	12	19	8	11	7	
Do. 1870... ...	11	7	9	4	7	3	
	14	7	10	5	6	3	
Do. 1871... ...	9	3	4	1	2	½	
	9	3	4	1	1	½	

C.—Plantations.

Plantation.	Acreage.	Nature of	Expenditure.					Receipts.	No. of trees planted out and casualties replaced.	No. of casualties that occurred during the year.	No. of trees permanently established.	Expenditure from commencement.	Remarks.
			Planting charges including pitting and channelling	Fencing.	Establishment.		Total.						
					Permanent.	Hired.							
Veeringepoorum, situated about 1 mile south of the Railway Station of that name in the old bed of the Palar river.	330	Casuarina equestifolia. Railway Fuel plantation.	Rs. A. P. 1,218 11 2	Rs. A. P.	Rs. A. P.	Rs A. P. 659 14 6	Rs. A. P. 1,878 9 8	None.	96,000	10,000	111,247	Rs A. P. 2,629 12 2	This plantation was commenced in June 1870; the average height of the trees planted last year 1870-71 is 5 feet, but many are 6 and 8 feet; some standing in the nursery and daily watered are 20 feet. Most of the plants suffer from want of water; the ground lies high above the river-bed, and it will be two or three years before the roots of the trees reach a permanent supply of moisture, till which time they must be watered. We shall plant out next season 200,000 plants if the season proves favourable; we have plenty of fine plants in the nursery to finish the whole of the plantation. The average cost per plant, including all expenditure, is nearly 4½ Pies.
Chaynoor, situated close to the Railway, 3 miles west of Vellore station.	110	It will be planted with Casuarina, Albizzia Lebbek, Acacia Arabica, Alangium lamarki.	.....	353 12 0	.....	533 4 3	887 0 3	.....	7,000	.....	7,000	898 10 3	We have a very large number of plants ready in the nurseries to plant out at the beginning of the rains, and expect to put down from 150,000 to 200,000 if the season proves favourable for planting operations. The average cost per plant is 1 Anna and 11 Pies, but this includes fencing, nurseries, etc., so that when the whole ground is planted, this will be reduced to about 6 Pies per plant permanently established.
Triputty, close to the Railway, and two miles south of the Triputty station.	35	Casuarina equestifolia will be planted.	.....	256 8 0	.....	135 7 4	391 15 4	Nil.	....	.....	.....	391 15 4	No planting has been done here, but the ground has been fenced and large nurseries formed in which we have now about 50,000 plants, 2 to 3 feet high, ready to plant out with the first rains.

Thengal, situated about 1½ miles south of the Poiney Railway bridge, and opposite the Trivellum plantation.	110	Casuarina equestifolia.	.....	.....	.....	.....	.....	.....	.....	.....	1,110	.....	This plantation has just been taken over from the Collector; the trees on ground cover about 9 acres being planted 24 feet plant from plant; about 500 of the plants are fine trees of 40 to 50 feet in height, but the remainder are very poor things which it will be advisable to cut away and re-plant. A nursery will be formed here for future planting. The ground is not fenced except the small planted piece.
Ammerdy plantation, situated 15 miles south of Vellore at the foot of the Javadi hills.	26	Mixed, containing specimens of about 50 different forest trees.	.....	.....	.....	281 1 1	281 1 1	Nil.	1,000	.....	9,000	2,256 4 5	This is an experimental plantation, in which all kinds of trees are tried; it is also used as a training school for us and the maistries. Here we try the effect of pruning and pollarding different kinds of trees, different methods of planting, etc., and as there are many different kinds of trees growing, it is a good place to learn the names of the trees, their mode of growth, flowering, and seeding season, etc, etc. We have about 2,000 Sandal plants to place out in the next rains, and shall plant about the same number yearly, so that the plantation may be a paying concern as well as a useful school.

Taking a total of all the plantations, the expenditure during the year has been Rs. 5,429-2-1, and the number of plants planted out 143,500.

SECTION III.

License and Voucher Forests and Operations therein.—All our forest are opened to the public to fell on license, but they may not fell the reserved timbers; these are reserved for departmental felling. The kinds the public are allowed to remove on license are all timbers classed under the head of junglewood at Rupee 1 per bandy-load; this includes every tree and shrub growing in the forests (except those classed as reserved), all bamboos, firewood, charcoal, etc; but our forests are very poor, and most of the timber used in the district is imported; our chief items of revenue are derived from sale of bamboos, Railway-fuel, Dyewood, and Sandal-wood; building timber we have none.

SECTION IV.

A.

Statement showing Receipts and Disbursements of North Arcot Forests during the year 1871-72.

Classification.	North Arcot.	
	RS. A. P.	RS. A. P.
Receipts.		
I.—Sale of timber brought to depôt by Government agency ...	3,218 11 0	
Value of timber supplied to the Department Public Works	... ...	
II.—Sale of timber, firewood, bamboos, and charcoal removed from the forests by purchasers including seigniorage ...	12,875 4 0	
Sale of confiscated timber deducting 50 per cent. of sale-proceeds paid to informants of clandestine felling—*Vide* G. O. No. 921, dated 4th May 1865	289 8 4	
V.—Sale of fruit and other minor forest produce	63 0 0	
VII.—Miscellaneous receipts	... ...	
Total Receipts...	... ...	16,446 7 4
A.—Conservancy and Working Expenditure.		
I.—Timber expenses for felling, clearing, sawing, and transport by land or water to depôt	1,922 6 0	
IB.—Carriage of confiscated timber	24 13 11	
II.—Purchase of tools and plant	113 1 6	
III.—Feed and keep of elephants and cattle	... ...	
IV.—Rent of leased forests, etc., etc.	... ...	
V.—Charges connecting with the collection of the revenue ...	... ...	
VI.—Plantations...	5,429 2 1	
VII.—Forest work, cutting creepers, etc., Reserve	1,424 1 8	
IX.—Experiment to test value of timber	... ...	
X.—Communications, buildings, minor works, etc.	182 12 9	
Total of Conservancy and Working...	9,096 5 11	
B.—Establishment.		
I.—Salaries	5,245 6 2	
II.—Travelling allowance	900 0 0	
III.—Contingencies	100 0 0	
Total of Establishment...	6,245 6 2	
Total of Expenditure...	... ...	15,341 12 1

B.

Statement showing the Timber felled Departmentally in the North Arcot Forests during the year 1871-72.

Division of Range.	Description of Timber and other Forest-produce.	No. of Cubic feet.	No. of Maunds.	Rate of Valuation per Cubic foot.	Ditto per Maund.	Total Valuation.
1	2	3	4	5	6	7
				RS. A. P.	RS. A. P.	RS. A. P.
Chendragherri	Redwood roots and stumps.	...	12,791	... ...	0 2 11¼	2,346 7 6
Do. ...	Do. posts	334	.....	1 11 3$\frac{1}{11}$	... ...	569 0 0
Do. ...	Do. do.	147	.....	1 8 0	... ...	220 8 0
Do. ...	Chiriman beams... ...	35	.....	0 8 5½	... ...	18 8 0
Vellore ...	Sandalwood	...	363$\frac{9}{12}$	.. ..	2 9 0	931 3 0
Do. ...	Do.	...	396	... ...	3 0 0	1,188 0 0
					Total...	5,273 10 6

C.

Statement exhibiting the Sales from the North Arcot Forest Depôts during the year 1871-72.

Name of Depôt.	Description of Timber or other forest-produce; Number of Cubic feet or Maunds sold, and rate of Valuation per Cubic foot or Maund.	Total Valuation.	Total Amount actually realized.	Difference between Columns 3 and 4.	Explanation of difference.
1	2	3	4	5	6
		RS. A. P.	RS. A. P.		
Kurcumbadi..	Redwood roots and stumps, 8,522 maunds, at Annas 3 and Pies 2$\frac{3}{10}$ per maund	1,700 0 0	1,700 0 0	Nil.	Not valued till sold.
Do. ...	Redwood posts, 334 cubic feet, at Rupees 1-11-3$\frac{1}{11}$ per cubic foot.	569 0 0	569 0 0	,,	Sold by log.
Do. ...	Chiriman beams, 35 cubic feet, at Annas 8 and Pies 5½ per cubic foot.	18 8 0	18 8 0	,,	Sold by log.
Vellore ...	Sandalwood, 363 $\frac{9}{12}$ maunds, at Rs. 2-9-0 per maund	931 3 0	931 3 0	,,	
	Total...	3,218 11 0	3,218 11 0	.....	
Total showing aggregate increase or decrease		... ...	... ...	.....	

D.

Statement showing the particulars of the Stock of Timber, etc., on hand in the North Arcot Depôts at the commencement and close of the official year 1871-72.

Description of Timber or Forest-produce.	No. of Cubic feet.	No. of Maunds.	Rate per Cubic foot or Maund.	Total Valuation.
1	2	3	4	5
Stock on 1st April 1871.			RS. A. P.	RS. A. P.
Redwood roots and stumps	.....	10,666$\frac{1}{3}$$\frac{1}{3}$	0 3 6	2,333 5 4
				2,333 5 4
Stock on 1st April 1872.				
Redwood roots and stumps, 373,424, at Rupees 17-14-0 per Ton	.....	.. ...	2,979 12 10	
Sandalwood, 395$\frac{3}{4}$$\frac{3}{8}$, at Rupees 3 per Maund.	.....	.....	1,188 0 0	
Redwood, 147 posts	.....	.....	220 8 0	
				4,388 4 10
			Total...	6,721 10 2
Add total valuation of timber and forest-produce felled during the year 1871-72 as per Column 7, Statement B.				5,273 10 6
			Grand Total...	11,995 4 8
Deduct total valuation of timber, etc., sold during the year 1871-72 as per Column 3, Statement C.				3,218 11 0
				8,776 9 8
Compare remainder with total under Column 5				6,721 10 2
			Increase in stock...	2,054 15 6

E.

Statement showing the Quantity of Timber, etc., taken on seignorage from the North Arcot Forests during the year 1871-72.

Description of Timber or Forest-produce.	No. of Cubic feet.	No. of Maunds.	No. of Bandy-loads.	No. of Tons.	Rate of seignorage or sale per Cubic foot, Maund, Ton, or per Bandy-load.	Total Receipts (under each head.)
1	2	3	4	5	6	7
						RS. A. P.
Junglewood ...	73,000	.....	.....	.....	Rupee 1 per bandy-load of 20 cubic feet.	3,650 0 0
Firewood ...	.....	.....	.....	758	Rupees 2 per ton ...	1,516 0 0
Charcoal... ...	.....	.....	.....	125$\frac{1}{2}$	Do. 4 per ton ...	502 0 0
Bark of wood ...	.....	.....	.....	69	Do. 2 per ton ...	138 0 0
Bamboos... ...	.....	.....	6,979	.....	Annas 8 per bandy-load	3,489 8 0
Tamarind fruit ...	.....	.....	.....	.....	.....	63 12 0
Railway fuel ...	.....	.....	.....	1,789$\frac{1}{2}$	Rupees 2 per ton ...	3,579 0 0
					Total...	12,938 4 0

SECTION V.

General Remarks.—Our revenue appears to be steadily on the increase. For the year 1869-70 it was Rupees 8,236, for 1870-71 it was Rupees 13,948, and for the year now closed it is Rupees 16,446, and it should be remembered that the revenue has been realized this year without the issue of licenses for reserved wood.

Mr. H. Thistlethwaite and Mr. W. Newman, the two Overseers in this range, have worked pretty well. Mr. H. Thistlethwaite is a careful man with his accounts, but he is too stout to be able to do much outdoor work.

Mr. W. R. Newman works well in forest or plantations, and I am mainly indebted to him for getting so many trees planted out during the year.

The Duffadars, Pygusts, and Peons are about the same as before; one Duffadar has charge of Chendragherry forests, one is employed as a Goomastah at the Overseer's office, Vellore.

Most of my Peons are a good-for-nothing set, who will not go into the forests without being dragged in by myself or the Overseers.

The health of the establishment has on the whole been good; the Overseers and I have had our usual share of jungle-fever; I am never free from it, but have not often been laid up more than a few days at a time; the Peons seldom get it, for, as I said above, they seldom go to the forests.

I have the honour to be,
Sir,
Your most obedient servant,

(Signed) T. SHEFFIELD,
Assistant Conservator of Forests.

APPENDIX E.

DEPUTY-CONSERVATOR'S OFFICE,
CAMP SALEM,
20th May 1872.

From

MR. J. H. B BROUGHAM,
Acting Assistant Conservator,
Salem Forests.

To

MAJOR R. H. BEDDOME,
Conservator of Forests.

SIR,—I have the honour to submit the Administration Report of the Salem Forests for the past official year.

2. On the 5th June 1871 I assumed charge of the division from Mr. Knox, the Assistant Collector, who had been placed in temporary charge on Mr. Nisbet's going away on leave, and during the absence of Mr. Woolridge, the Forest Officer of South Arcot, I had also been in charge of that range for about four months.

3. *Inspection Tours.*—From the 5th to 13th and from 19th to 20th June, I was engaged in the office examining and reading up the records with the view that I might gain every information respecting the duties ; on the 14th I accompanied you to Tripatore, and on the 15th inspected the plantation at Mullapuram ; between the 16th and 18th visited a part of the Trichengode sub-division, and from the 21st to the 6th July accompanied you on a tour of inspection to the sites selected for reserves in the district of South Arcot and to the Shevaroy Hill plantation. From 14th to 19th, and between the latter date and 23rd, visited the Mullapuram plantation, the A., B., and C. reserves, and the jungles on the slopes of the Shevaroys.

4. From 12th to 28th August inspected forest roads Nos. 2 and 3 in the Denkencottah range, the jungles on the banks of the Chennar and Cauvery rivers ; held an auction of confiscated and depôt timber at Pennagram and visited the Teak-reserve on the Yellagherries, where some Sandalwood trees were discovered, and selected site for an experimental Sandalwood plantation.

5. Between the 10th and 16th September inspected the Sandalwood store at Tripatore, the Overseer's books, and establishment ; from the 19th to 22nd explored the jungles west of Ahtur ghaut, and visited the plantation on the Hills ; between the 23rd and 28th visited the Mullapuram plantation and a tract of jungle along the line of Railway admirably situated for a Fuel-reserve.

6. From the 18th to 21st October, inspected Patchoor and Mullapuram plantations, and selected sites for nurseries in the A., B., and C. reserves ; on 22nd and 23rd inspected the Kudoovumputty jungles ; on the 29th travelled from Vaniembady to Tripatore for the purpose of inspecting the fuel cut for the Railway Company ; from 15th to 21st November was present during the measurement of the fuel stacks at Mullapuram, and investigated at Tripatore subject of a petition of certain mat and basket manufacturers ; from 21st to 27th, inspected the sites proposed for the formation of reserves and the bamboo and timber depôts of Tripatore, Singarapett, and Haroor ; between the 1st and 21st December was engaged in the district selecting new

stations for Tannahs; inspected work performed in the B. reserve. The state of my health during this month prevented me from spending more time in the district.

7. From 8th to 10th January inspected and made over a fuel-tract to a Contractor of the Railway Company and the jungles running in a parallel direction with it west of Ahtur; 12th and 13th waited at Tripatore to meet the Head Assistant Collector with the object of consulting him upon matters relating to the alleged grievance of the Tripatore mat and basket manufacturers; from the 19th to 24th accompanied you during your inspection of the establishment, plantations, and Range office, and on the 30th and 31st visited the Karapur tannah and the jungles along the foot of the Shevaroys, where Charcoal burners and others were reported to be doing great damage to the jungles. From the 5th to 12th February was engaged with the Head Assistant Collector taking over certain jungle lands in the Utengherry and Tripatore taluqs to complete the area required for fuel-reserves; 14th and 15th visited Mullapuram plantation, and from 18th to 29th accompanied you on your inspection of the Yallagherry Hills and the establishment and the office of the Denkencottah Overseer.

8. I had been suffering from fever nearly the whole of March, and consequently could not bear much exposure to the sun; I was, however, out six days in the month, and during that time I received tenders for the bamboo contract in the Tripatore range and inspected a few tannahs.

SECTION II.

9. Reserved Forests.—*Denkencottah.*—This range has been in charge of Overseer Mahomed Alli Saib, who has performed his duties to my entire satisfaction. It was almost entirely worked by Government agency, consequently regarded as a reserve forest, though strictly speaking the name is not applicable owing to their also being removals by license.

10. During the year there were 4,305-3-0 cubic feet of timber and 1,33) maunds 24 lbs. of Sandalwood felled and stored in depôts at a cost of Rupees 2,066-15-11 besides a miscellaneous collection of forest-products which cost Rupees 92-8-0.

Contemplated Operations.—To fell and convey to depôt timbers of different kinds to meet the requirements of public departments and the market, and to work the Atchawood forests on the banks of the Cauvery, provided sums are allotted for the repairs of road No. II. and the reconstruction of road No. III., are the contemplated operations.

11. B.—Fuel Reserves.—These were under the charge of Mr. Gamble until the 3rd of February last, when his services were dispensed with in consequence of his having repeatedly failed to evince that care and attention to his duties as was expected of him, and they have since been placed under Mr. Coxe, a young man who for some time received training under the Forest-officer of Cuddapah.

12. Independent of the expenditure under each reserve and plantation, Rupees 870-2-8 was incurred during the year, being the salary of the Overseer in charge of the undermentioned reserves, etc.

13. *A. Reserve.*—This tract is about 2,560 acres in extent and conveniently situated to the Railway; during the year about ten measures of Babool seeds were broadcast here and there in the gaps; the seeds however did not germinate. A nursery was established for the purpose of planting in trenches and pits and filling all gaps in the jungle. The expenditure during the year has been Rupees 117-8-8.

14. *B. Reserve.*—This tract measures 964 acres and is also situated on the line of Railway. There having been large gaps which required to be filled up, I had 804 chains of channelling excavated and the whole sown up with Babool and Acacia amara seeds. A fire-trace had been cut, but notwithstanding a fire broke out in March last doing some damage. A nursery has also been established on this reserve for the purpose above-mentioned. The expenditure during the year has been Rupees 205-10-7.

15. *C. Reserve.*—The extent is 320 acres and to which is attached the plantation of Mullapuram. An accidental fire occurred here also which penetrated a little into the plantation, but

was extinguished before doing much damage. No expenditure has been incurred on it beyond Rupees 169-14-0 the pay of the Maistry in charge.

16. *D. and E. Reserves.*—These are situated about eleven miles from the Jollarpett Railway station and comprise the respective areas of 1,600 and 2,400 acres; being hill reserves pit or channel planting could not be successfully carried out, and owing to the entire absence of water, a nursery could not be established. The expenditure has been Rupees 59 and 60 respectively.

17. Three other reserves were taken over during the year, leaving but four more to be settled; of these, two have been formally made over. The Haroor reserve contains about 1,205 acres and is situated seven miles from the Railway station of Morapoor. The Utengherry reserve, four miles from the Samulputty station, is divided into two blocks by the main road, one block containing 335 and the other 89 acres.

18. The Singarapett reserve is situated on a line of good road about twelve miles from Samulputty and seventeen miles from Tripatore, and the extent of it is about 8 square-miles.

19. *Contemplated Operations.*—The operations which will be undertaken are the fencing in of the above, including the four tracts near Vadagumputty six miles from the Railway station of Ahtur, cutting away brushwood, broadcast, channel and pit planting, thinning and carting out of dead or fallen timber, fire-tracing, and farming out forest-produce, which in course of time is hoped will make all or some of the reserves self-supporting.

20. A skeletion map is herewith forwarded in which is marked off the situation of all the reserves and plantations alluded to.

21. C.—PLANTATIONS—*Mullapuram*.—This plantation is improving very favourably. The Babool seeds that were broadcast during the last rainy season over an area of about 40 acres, germinated satisfactorily, but casualties have, however, been largely increasing, as the heat has been growing more and more powerful. Babool seedlings seldom thrive unless the roots have penetrated a certain depth into the soil, and then a shower of rain now and again in the hot months is necessary to perfectly establish them. Even when sown during the rains, the seeds, unless they have been kept for a year, or collected from well matured trees, do not grow for some months afterwards, and then the successfulness depends greatly on the character of the season. On the whole, however, the plantation has done well.

22. The following tree-seeds were grown in the nursery—Illupay, Poinciana, Cassia florida, and Vamboo; the last two kinds have been grown for the purpose of pit-planting, the rest to be given to ryots or the Revenue Department for avenue-planting; although these trees have been offered free to the ryots to be planted around their wells or borders of their fields with a view simply to encourage private planting, none have appeared willing to accept the privilege offered them. Expenditure has been Rupees 355-4-2.

23. *Patchoor.*—This plantation, I regret, has proved a failure again; in my predecessor's time and in mine Babool seeds have been broadcast. Though germination never failed, but from the hardness of the soil the operations have never proved successful. The trees put out in pits have shown no growth at all, arising no doubt from the cause above-mentioned and the large proportion of lime in the soil. The expenditure during the year has been Rupees 62-9-9.

24. *Shevaroy Hills.*—This plantation has been looked upon only in the light of a garden experiment, and the expenditure kept down as much as the well-doing of the plantation admitted. 350 Eucalyptus plants were put out during the year, and about 60 other plants, viz., Eucalyptus and Casuarina, were issued to the Revenue-officer on the Hills, for the purpose, I believe, of planting the Post Office compound and the Chuttrum enclosure.

25. The condition of the trees except the Walnut (Aleurites triloba) and the Blue-gum is not healthy, and the trees look stunted probably from their having no chance of doing their best from the rocky nature of the soil as well as from the attacks of the Goat-moth. The expenditure during the year has been Rupees 198-7-6.

26. *Contemplated Operations.*—Extending planting by means of pitting and channelling and bringing under the plough more land for broadcast sowing.

SECTION III.

27. *License and Voucher forests.*—The license removals have been as follows :—

Division or Range.	On License.						On Free Passes.			
	Cubic feet of Timber.	Bandy-loads of Charcoal.	Bandy-loads of Bamboos.	Bandy-loads of Barks.	Bandy-loads of Firewood.	Tons of Engine-fuel.	Cubic feet of Timber.	Bandy-loads of Firewood.	Bandy-loads of Bamboos.	Bandy-loads of Charcoal.
Denkencottah ...	5,030	206½	4,376½	139	3,046	...	25,790	No account.	385	No account.
Tripatore.	7,095-5-5	390½	3,923½	136	3,158	5,565 1799/2240	18,973	275	1,693	19¼
Salem ...	16,631	988½	4,518¾	29	4,341	7,258 1027/2240	824	No account.	33¼	No account.

28. *Contemplated Operations.*—Introducing departmental felling more largely and establishing depôts in convenient places, are the contemplated operations.

SECTION IV.

29. *Yield of Forest.*—The subjoined statement exhibits the yield of the forests for the year under review :—

Name of Range.	Timber.			Sandalwood.	Firewood.		Bamboos.		Charcoal.		Barks.	Forest-products.
	Departmentally.	On License.	Free.	Departmentally.	On License.	Free.	On License.	Free.	On License.	Free.	On License	Departmentally.
	C. FT.	C. FT.	C. FT.	MDS.	TONS.	TONS.	BANDY LOADS.	BANDY LOADS.	TONS.	TONS.	BANDY LOADS.	MDS.
Denkencottah...	4,805¼	5,030	25,790	1,330 6/7	1,354 23/28	No account.	4,376½	385	91 2218/2240	...	139	205¾
Tripatore.	1,761½	7,095-5-5	18,973	15 7/28	6,975 1399/2240	122 43/56	3,923½	1,693	174 300/2240	8 27/56	136	4 11/14
Salem ...	83-8½	16,631	824	51 11/28	9,196 907/2240	No account.	4,518½	33¼	441 3/32	...	29	...

SECTION V.

30. *Financial Results.*—The financial results for the year are those particularized in Appendix A., and exceed the receipts of the previous year by Rupees 10,828-5-3.

SECTION VI.

31. *General Remarks.*—The subjoined statement exhibits the extent of departmental felling, the sales from depôts during the year, and the particulars of stock in hand on the 31st March 1872.

Timber, etc., felled and conveyed to Depots during the year.

Description of Timber.	Cubical contents.	Nominal value.	Sandalwood.	Nominal value.	Forest-products.									
					Pupli dye.	Nominal value.	Pupli dye.	Nominal value.	Bees-wax.	Nominal value.	Honey.	Nominal value.	Gall-nuts.	Nominal value.
		Rs. A. P.	M. Lbs.	Rs.	M. Lbs	Rs. A. P.	M. Lbs	Rs. A. P.	M. Lbs.	Rs. A. P.	M. Lbs.	Rs. A. P.	M. Lbs.	Rs. A. P.
1st, 2nd, and 3rd class ..	6,150 3 8	4,612 11 6	1,397 18	4,892	67 25	678 14 10	67 18⅔	88 13 0	2 3½	2 12 7½	1 7	1 10 3	71 9⅓	93 10 0

Timber, etc., sold from Depots during the year.

Description of Timber.	Timber.		Sandalwood.		Forest-products.									
	Cubic feet.	Amount realized.	Mds. lbs.	Amount realized.	Cupli dye.	Amount realized.	Bees-wax.	Amount realized.	Honey.	Amount realized.	Gall-nuts.	Amount realized.		
		Rs. A. P.		Rs. A. P.	Mds.	Rs. A. P.	M. Lbs.	Rs. A. P.	M. Lbs	Rs. A. P.	M. Lbs.	Rs. A. P.		
1st, 2nd, and 3rd class...	6,441 7 8	5,531 9 5	1,312 16	5,078 8 4	24	313 13 7	1 14½	29 3 6	1 2	2 6 7	48 0	51 0 0		

Particulars of stock in hand on the 31st March 1872.

Range.	Description of Timber.			Sandalwood.		Forest-products.									
	Timber.	Cubical contents.	Nominal value.	Mds. lbs.	Nominal value.	Cupli dye.	Nominal value.	Pupli dye.	Nominal value.	Bees-wax.	Nominal value.	Honey.	Nominal value.	Gall-nuts.	Nominal value.
			Rs. A. P.		Rs. A.	M. Lbs.	Rs. A. P.	M. Lbs.	Rs. A.	M. Lbs.	Rs. A. P.	M. Lbs.	Rs. A. P.	M. Lbs.	Rs. A.
Denkencottah.	1st, 2nd, and 3rd sort	1,710 9 11	1,283 1 11	358 0	1,253 0	59 4	591 6 10	67 18⅔	88 13	0 17	0 12 9	0 5	0 3 9	23 9⅓	30 10
Tripatore	Do. ...	47 11 6	35 15 6	.....	... ...	...	... ...	...	... ...	...	... ...	...	...	... ...	... ...
Salem...	1st class...	72 4 7	54 4 7	51 15	180 6	...	... ...	...	... ...	...	... ...	...	...	... ...	... ...

32. The sales of confiscated timber have been as follows :—

Timber, 1st class 12¼ bandy-loads, 2nd class 31½ bandy-loads, 3rd class 18$\frac{1}{16}$ bandy-loads; Bamboos, 41¼; Firewood, 122 bandy-loads; Charcoal, 2¼, realizing Rupees 678-10-0, of which Rupees 167-4-2 had been disbursed to informers.

33. The contract for Sandalwood with the permission of the Collector and yourself has been given away for three years to Gool Mahommed and Co.

34. There are to be two deliveries in the year, and the Forest Department are under no obligation as to quantity, the supply being only what can be steadily removed from the jungles without injuring the yield.

35. During the year there were several jungle-tracts marked off and assigned to contractors to supply the Locomotive Department of the Madras Railway Company with fuel. I have been very careful to see that a few trees were left here and there with the object of aiding re-production.

36. The right of felling bamboos in the Tripatore Range has been farmed out for one year; the quantity has been restricted to three hundred bandy-loads per month. In consequence of the bamboos seeding, the contractors in their agreements will be bound down to remove the seeding bamboos before the others, and in the event of their failing to do so, a clause will be provided by which the Forest Department reserve the right of cutting and selling such bamboos. I am now in communication with the Collector regarding a proposition to farm firewood out also, and by this means I hope to free the Peons of a good deal of tannah duties. They could then devote more of their time to the conservation of the jungles.

37. The departmental system is also gradually to be extended, but this must be prosecuted judiciously owing to the large quantity of timber that is cut in the jaghire lands and the manner in which forests are sacrificed by the Jaghiredars for the profits or revenue received. Their timber is sold much under Government rates, and the seigniorage rates about one-half less than those prescribed by Government for the Forest Department. Another reason why our timber will not find a ready market is because the natives look to their size; they prefer getting them of smaller dimensions than those which we keep. The contractor that had the contract of the Tripatore jungles last year could not effect good or ready sales for the reason that we insisted on his removing such timber as could measure three feet in girth. To get over the difficulty he obtained licenses from Jaghire and Mittahdars and carted out different descriptions of under-sized wood which he mixed up with the timber obtained from the Government jungles and thereby effected its sale. Under any other circumstances he could not have sold much unless at a very nominal rate, and in doing that he would have sustained a severe loss.

38. *Forest-offences.*—Clandestine felling was rather more on the increase this year than in 1870-71, consequently the Peons and Pygusts had much to do in the detection and eventual prosecution of the transgressors. Out of 224 persons charged before the Magistrates, conviction was obtained against 203 men, 21 only being acquitted.

39. *Conduct of Overseers.*—I had no occasion to find fault with the Overseers, and throughout the year each conducted his duties satisfactorily. The reserves and plantations have slightly improved since Mr. Coxe assumed charge of them, and I have a hope that he will do well and continue to work with the same willingness and energy that he now shows.

40. *Health of Establishment.*—In the Tripatore and Salem ranges fever and diarrhœa were rather severe, and two deaths occurred among the Peons during the year; more may have happened had I not permitted those suffering from very severe attacks of fever to proceed on leave; the health however of the Denkencottah staff was more satisfactory. I myself suffered very severely from fever, especially in the months of February and March.

41. During the year a pretty large collection of plants was dried, and specimens of various kinds of seeds and gums collected for the Central and Range Offices.

I have the honour to be,
Sir,
Your most obedient servant.

(Signed) J. H. B. BROUGHAM,
Acting Assistant Conservator.

STATEMENT A.

Receipts and Charges of the Salem Forests for the official year 1871-72.

Receipts.	Rs. A. P.	Rs. A. P.
I.—Sale of Timber and Sandalwood brought to depôts by Government Agency	9,542 4 3	
Value of Timber supplied to Department Public Works and Central Jail, Salem	1,067 13 6	
II.—Sale of Timber, Firewood, Bamboos, etc., removed from the forests by purchasers including seignorage	49,425 1 6	
IV.—Sale of confiscated Timber, deducting a moiety of the sale-proceeds paid to informants	493 8 4	
VI.—Sale of fruits and other minor Forest-produce	631 9 8	
VII.—Permit fees and rent of jungles and privileges	13,461 2 10	
IX.—Miscellaneous Receipts	892 4 9	
		75,503 7 10
A.—Conservancy and Working.		
I.—Timber expenses for felling, clearing and sawing, and transport of timber by land and water to depôts	4,279 10 11	
II.—Purchase of elephants, cattle, tools and plant	8 10 0	
IV.—Charges connected with the collection of revenue on fruits, etc	107 13 5	
VI.—Plantations	681 5 5	
VII.—Reserve Tracts for Railway Fuel	1,545 3 11	
IX.—Communications, buildings and minor works	390 0 10	
Total Conservancy and Working...	.....	7,081 12 6
B.—Establishment.		
I.—Salaries	8,699 4 9	
II.—Travelling allowances	1,312 0 0	
III.—Contingencies	228 4 0	
Total of Establishment	.....	10,239 8 9
Total of Expenditure	.....	17,321 5 3

B.

Statement exhibiting in detail the extent of Departmental felling during the year 1871-72.

Division of Range.	Description of Timber and other Forest Produce.	Number of Cubic feet.	Number of Maunds.	Rate of Valuation per Cubic foot.	Rate of Valuation per Maund.	Total Valuation.
1	2	3	4	5	6	7
				RS. A. P.	RS. A. P.	RS. A. P.
Denkencottah	1st, 2nd, and 3rd Class timber	4,305 3	.....	0 12 0	... ...	3,228 15 0
	Sandalwood	.....	1,490 14	... ...	3 2 0	4,658 0 0
Tripatore	1st, 2nd, and 3rd Class timber	1,761 4	.....	0 12 0	... ...	1,321 0 0
	Sandalwood...	.....	17 2	... ...	3 2 0	53 6 0
Salem...	1st Class timber	83 8 6	.....	0 12 0	... ...	62 12 6
	Sandalwood	... .	57 18	... ...	3 2 0	180 6 0
	Total...	6,150 3 6	1,565 9	.....	.....	9,504 7 6

C.

Statement exhibiting in detail the Sales from each Depôt during the year 1871-72.

Name of Depôt.	Description of Timber or other Forest-produce, number of Cubic feet or Maunds sold, and rate of Valuation per Cubic foot or Maund.		Total Valuation.	Total Amount actually realized.	Difference between columns 3 and 4.	Explanation of difference.
1	2		3	4	5	6
			RS. A. P.	RS. A. P.	RS. A. P.	
Denkencottah ...	1st, 2nd, and 3rd Class timber.	2,670-9-11 at 12 Annas per cubic foot...	3,427 0 11	3,769 4 4	342 3 5	
Pennagram... ...	Do.	1,877-2-4 do. do ...				
Chennar	Do.	21-4-8 do. do. ...				
Denkencottah ...	Sandalwood	1,369-5 at Rs. 3-2-0 per maund	4,278 12 0	4,738 8 0	459 12 0	
Tripatore	1st, 2nd, and 3rd Class timber.	1,860-10-10 at 12 Annas per cubic foot...	1,395 7 2	1,739 3 10	343 12 8	
Do. ...	Sandalwood	100-22 at Rs. 3-2-0 per maund	315 4 0	340 0 4	24 12 4	
Salem...	1st Class timber	11-3-11 at 12 Annas per cubic foot ...	8 7 11	23 1 3	14 9 4	
			9,425 0 0	10,610 1 9		
		Total showing aggregate increase...	.....	.....	1,185 1 9	

D.

Statement showing the particulars of Stock in hand at the commencement and close of the official year 1871-72, *and the extent of increase or diminution as follows:—*

Description of Timber or Forest-produce.	Number of Cubic feet.	Number of Maunds.	Rate per Cubic foot or Maund.	Total Valuation.
1	2	3	4	5
Stock on 31*st March* 1871.			RS. A. P.	RS. A. P.
1st, 2nd, and 3rd Class Timber...	2,122 2 6	.....	0 12 0	1,591 10 6
Sandalwood...	.....	363 10	3 2 0	1,135 10 0
Total...	2,122 2 6	363 10	.....	2,727 4 6
Stock on 31*st March* 1872.				
1st, 2nd and 3rd Class Timber ...	1,831 ..	0 12 0	1,373 4 0	
Sandalwood	...	458 1/4 3 2 0	1,433 8 0	
				2,806 12 0
			Total...	5,534 0 6
Add total valuation of timber during the year as per Column 7, Statement B...				9,504 7 6
			Grand Total...	15,038 8 0
Deduct total valuation of timber, etc., sold during the year as per Column 3, Statement C.				9,425 0 0
				5,613 8 0
Compare remainder with total under Column 5				5,534 0 6
			Increase in stock...	79 7 6

E.

Statement showing the Quantity of Timber, etc., disposed of under the License system during the year 1871-72.

Description of Timber or Forest-produce.	Number of Cubic feet.	Number of Maunds.	Rate of Seignorage or sale per Cubic foot or Maund.	Total Receipts under each head.
1	2	3	4	5
		MDS. LBS.	RS. A. P.	RS. A. P.
1st, 2nd, and 3rd Class Timber...	28,756 5 6	.....	About 0 2 5 1/2	4,405 14 1
Bamboos (bandy-loads) ...	12,123 1/5	.....	0 13 0	9,818 7 9
Charcoal...	.....	68,712 0	,, 0 0 6 1/2	2,251 4 1
Firewood	Tons...	4,669 1,440	0 14 4 1/2	4,196 12 8
Engine Fuel	Do. ...	12,836 1,547	2 3 10 4/5	28,752 10 11
			Total...	49,425 1 6

VADAGUMPUTTY,
18*th July* 1872.

(Signed) J. H. B. BROUGHAM,
Acting Assistant Conservator of Forests.

APPENDIX F.

ASSISTANT CONSERVATOR'S OFFICE,
CAMP AT CHENGUM, *2nd June* 1872.

From

H. L. WOOLDRIDGE, ESQ.,
Assistant Conservator of Forests, South Arcot,

To

MAJOR R. H. BEDDOME,
Conservator of Forests, Ootacamund.

SIR,—I have the honour to submit the Administration Report for the South Arcot Forests for the year 1871-72, with seven statements marked A. to G. attached.

SECTION I.

Inspection Tours of the Officer in Charge.—On the 9th April 1871 I left Chengum depôt, where I had camped for the previous week to prepare annual and other accounts, to take stock of timber, and to compare the balance in hand with the Registers, for the hill-slopes near Paramanundal village, which lies about 1½ miles from the base of the Thanemallay on the south-west. I explored the hill-forests for two days, marked a quantity of Nunai on the slopes, and observed Vengay, Doomby, Marethey, Eruvady, and other hard wood trees of the description usually found in deciduous forests, to be moderately plentiful. The size of the timber was generally under average, though, for the most part, sound and ripe. I saw no Teak or Sandal on these slopes, but understood that on the summit both were to be found in considerable quantity, but of tender age. I have since proved this to have been a correct statement: the young Sandal trees are well grown, but, excepting a small percentage of old trees, none will be fit to cut for at least 4 to 5 years. The Teak trees are very close together on several small rocky eminences on the southern end of the plateau, and consist of saplings and suckers from old stocks cut down many years ago, with very few full grown trees among them; their average height is 18 feet, and circumference 20 inches, at 3 feet from the ground. The Teak saplings are too close together, never to become fine timber without thinning out, and the suckers are equally choked.

A good deal might be done to both Sandal and Teak in the way of improvement by cultivation and propagation, as also to other sorts of valuable timber-saplings, if this range of hills, the "Thanemallay," was to be made a forest-reserve of the South Arcot Range. The villages on the summit pay land-tax to the Tripatore Treasury in Salem District, but the forests on the slopes are worked by South Arcot establishment; the villages and land around the base belonging to the latter district. The Salem Forest officials seldom appear on the scene, and the plateau is even now virtually under the protection of the South Arcot Conservancy Establishment. A timber contractor, who supplied timber to the Government timber depôt at Tripatore, removed about 60 head-loads of Sandal-wood in the early part of 1871, and Tripatore merchants and Chetties occasionally purchase forest-fruits from the hill-men. With these exceptions, nothing has been removed by the Tripatore Range Officer, nor, indeed, could any heavy timber, without great expense, be taken away by him, as the "Thanemallay" is nearly an entirely separate range; a low saddle only connecting it with the Poloor hills on the north, and a deep valley, through which the Cheyaur runs, dividing it from the Javadimallay (main range) on the west.

I returned to Chengum depôt on the 11th, and again broke up camp on the 22nd, starting for the eastern slopes of the Thanemallay. I found the forests and the formation of the country similar to the western. After this trip I went to Trinomallay depôt, and examined the balance of timber in hand with the Registers, etc. I remained a few days at that place, and then returned to Chengum early in May, where I spent the rest of the month in office-work, though suffering much from jungle-fever (intermittent), severe diarrhœa and the excessive heat of the weather. In June I had to apply for sick leave to recover, which Government were pleased to grant for three months; for the fever, which first attacked me in April, and had continued from that time with more or less severity, suddenly changed to remittent about the 22nd May, and completely prostrated me, weakened as I was by previous illness. During my absence on this account the charge of the range was made over to Mr. Brougham, the Acting Assistant Conservator in charge of Salem forests. He visited South Arcot in June, and I learn, from his reports for that and the following month, that he met you at Ginjee, and inspected some of the Ginjee Railway fuel-reserves and the Moothenai local fuel-reserve in company with you; also that owing to press of work in the Salem District he could not proceed to this range in July; however, the Overseer in immediate charge received instructions from him to proceed to inspect the forests adjoining the North Arcot boundary, and to prevent and detect, as far as he could, the smuggling of timber from them by the wood-cutters of the adjoining district, as such was the information that had been communicated. A Forest Peon had been specially placed at this point by myself with the same object in view just previous to my illness. In August the officer in charge again found himself unable to visit the range, but the Overseer in the early part of the month carried out the instructions he had received, and visited the Moollacadoo jungles on the northern slopes of the Thanemallay, abutting on the North Arcot forests, and detected that great damage had been done to many "Kadukah" trees by the inhabitants of Moollacadoo and adjacent villages by lopping large branches for the purpose of more easily gathering the galls and nuts. As such a practice would soon destroy the trees as well as the crop of the following season, the people were desired to put a stop to the practice at once, and failing to do so, they were warned that they would become liable to prosecution for mischief. The Overseer, however, though observing many traces of timber-smuggling, could obtain no clue to the perpetrators. The Peon in whose charge this portion of the range was, was found to be quite unfit for such an important post, and was at once transferred; he has since been appointed to a fuel-reserve to act under the supervision of a more trustworthy person than himself.

The eastern portion of the Javadi Hills, the Chinnasamodrum fuel-reserve and the Moothenai fuel-reserve were visited during the month of August; the latter reserve frequently, for, in consequence of no protective establishment being entertained for it, smuggling had occurred to a mall extent, and, indeed, it was noticed by yourself that some timber had been lately cut within the boundary when visiting it with the Acting Assistant in charge in June. After my return from leave, we were fortunate enough to receive information of several cart-loads of timber being removed and of illicit felling taking place in this very reserve. Fifteen offenders were detected in the act, and the Subordinate Magistrate sentenced fourteen of them, each to eight days' rigorous imprisonment; the timber cut was valued at Rupees 23; and since that no similar offences have occurred in that tract.

On the 21st August I returned from sick leave and proceeded to Salem for the purpose of resuming charge of the range; when there, having shortly before had my right hand injured badly, I put myself under Dr. Pearse's treatment till the 10th, as I had the honour to report to you at the time. This short stay at Salem head-quarter office enabled me to despatch the South Arcot Forest Returns for August direct, instead of their being delayed by being re-forwarded to me in camp; and also enabled me to take notes of Government orders and Board's Proceedings of previous dates connected with the South Arcot Range, of which, as the two forests had been under one officer, no separate file had been handed me on receiving charge.

On the 12th having arrived again at Chengum depôt, I remained there a short while, obtaining from the Overseer and from files information as to the operations carried on during my

absence ; and on the 14th evening camped at Vallaimpet, then inspected the local fuel-reserves, and visited the Pundrave forests (Javadi slopes). On the 24th I went to examine the Ginjee belt between the Pooniar and Cusbah of Trinomallay, for certain portions of which darkhasts had been received, and I had been requested by the divisional officer to state whether the jungle land would be available for the purpose of cultivation. I decided that it could be given for permanent cultivation, but recommended that the rest of the block should be divided into two sections ; the one for present fuel-supply, and the other, the more remote from the Cusbah, should be reserved for future demands, and at present be closed to all felling, but to remain open to cattle-grazing and collection of dead wood or fallen timber by the inhabitants of villages surrounding or within proposed limits. The belt in question extends twelve miles in a north-westerly direction, and is about five and-a-half miles broad ; cultivation is included in this.

The Yerryoor Hills were visited and examined throughout. They lie between the towns of Chengum and Trinomallay ; the most western spur being six miles from the former and adjacent to the high road. The height of this range is about 1,400 feet above the sea ; there is no plateau, the range consisting of a series of low hills, some here and there running up to a peak. The jungle along the base and for about half way up the slope is thick, but stunted and scrubby. Higher up Nunai is abundant ; Coongilam trees also numerous. The timber is small, and not sufficiently ripe to fell. A few of the better class, such as Satin, Vengay, Eruvady and Acha, are intermingled with them ; there are no villages nearer than two miles, and there is low jungle for fuel and other agricultural and domestic demands in considerable quantity close to the villages. The streams dry up during the hot season. The length of the range is about ten miles and breadth two and-a-half to three miles. There has been no felling on these hills to speak of. It is in contemplation to make a forest-reserve of the eastern portion of them, which is known by the name of " Cavatymallay ;" and as a branch road has been lately cut by the Public Works Department from the Cusbah of Trinomallay to Canjee (the latter, an important village on the North Arcot boundary near Poloor), which is led through a Pass in this range, transport of timber will henceforth be made easy. Cattle are not pastured in any number on this hill, the higher and moister being usually selected for that purpose ; and this circumstance will, I fancy, facilitate their entire exclusion when the reserve-boundaries are settled.

It was noticed that charcoal-burners had committed much damage by cutting saplings of good timber for making charcoal ; numerous patches, some measuring nearly an acre, were observed that had been completely divested of every sapling by them. It is nearly impossible to detect persons in the act of doing so with the small establishment allowed ; the damage is generally only found out afterwards by the Peons when patrolling the jungles from time to time ; such careless felling could not well be checked till Government had passed orders regarding the supposed right of individuals to burn charcoal in any jungle free of all tax or restriction in the Trinomallay Taluq. Now, however, that they are to be allowed to prepare the fuel, subject to certain restrictions as to locality, etc., it will be vastly different, and the charcoal-burners already understand that they cannot cut where and what they please with impunity.

In the early part of October another examination was made of some " assessed waste" suited for fuel plantation, and the quantity available ascertained to be about 160 cawnies, from the Pymash Accounts ; the block lies about two miles south of Chengum timber depôt. After this I proceeded to Ginjee reserves, and superintended planting operations there for the remainder of the month. I returned to Trinomallay timber yard on the 30th October.

Having despatched the monthly accounts and other office-work I left again for Chengum depôt and local fuel-reserves, and after visiting them as well as the hill-forests, near which they have been formed, returned to Trinomallay Cusbah on the 16th November, and spent the rest of the month in visiting the firewood jungles surrounding the Cusbah. From time to time the conservancy establishment was strengthened by three men who were directed to patrol the nearest jungles, as at this time the Cartigai festival taking place many visitors and devotees arrive and

fire-wood is in much demand as well as fodder and pasturage for the numerous cattle. It is the custom to bring for sale on such occasions.

On the 2nd December I halted at Chengum timber yard, using it as a central point from which to make tours of inspection through the whole of the jungles in that division from Pootoo-polliem on the northern line to Ravandapady on the southern side. The fuel-reserves of Moothenai, Chinnasamodrum, and Annandavady, were visited this month by the divisional officer, under instructions from the Collector, for the purpose of investigating the rights of ryots to land-pasturage and other privileges in the jungle within the proposed boundaries of the reserves; I and the Forest Overseer going also on each occasion to give information. The question of the boundaries having been settled, and rights investigated, special rules for local fuel-reserve were roughly drafted in consultation with the people, revenue-officers, and myself, and were then submitted for the Collector's approval. This month a temporary forest establishment of one Watchman and an Assistant was placed on the Trinomallay Hill to protect the jungle from fire and to generally improve, by clearing around, pruning, etc., the seedlings and saplings of Vengay, Eruvady, and Satin-wood, that I had remarked on a previous inspection to be particularly numerous in a valley on the western side. The Ginjee fuel-reserve planting operations had been carried on satisfactorily, considering it was the very first time such work had been undertaken in this forest range. They were inspected as usual.

On the 3rd January I again camped at Trinomallay depôt, and on the 15th again started for the Ginjee division, visiting the Pakkum Hills on the way. From Ginjee I went to Tindivanam to meet the Collector, who was about to make a tour of the district, and see the reserves and jungles himself. From Tindivanam, on the 18th, I proceeded to Cuddalore, and again left for Trinomallay Taluq, where I was to meet Mr. Garstin and accompany him around the division. I travelled *via* Punrooty and Tricoloor to examine that portion of the district on the way. The Collector and I visited the local fuel-reserves in the Trinomallay Taluq, the "Checkady" jungle, and then proceeded to Kallakoorchy *via* the western jungle road, which leads from Chinnamapett to Peeringalathoor, visited a bit of the Peeringalathoor fuel-reserve *en route*, and passed by Thavetnelloredroog, camped at Chinnamapett, Peeringalathoor, Shankarapooram, Kutcheryapolliam and Chinnasalem. We arrived at Kallakoorchy Cusbah on the 2nd February. I examined on this occasion what seemed to me to be the highest peak of Cooroomba Gounden's Jaghire, remaining one day only. This Poligar's forests are adjoining the Government forests at Checkady. Whilst encamped at Chinnasalem I went to the Ahtoor jungles on the Salem and South Arcot boundary, as I had been informed that much fuel was obtained for the southern taluqs from them. I found scarcely any jungle at the place, and there is no doubt in my mind that the fuel spoken of is supplied from the Jaddaiya Gounden Poligar's hill-slopes.

From the 2nd to the 8th February I was engaged in inspecting the scrub-jungles and streams of Kallakoorchy, north of the Cusbah, and noting the quantity of timber, fuel, and bamboos brought from the Jaddaiya Gounden Poligar's forests for supply to the country around. There are two ghauts by which his forest-produce is brought down, principally one near Kutcheryapolliam village, and the other on the southern side near the Ahtoor Taluq boundary. Cooroomba Gounden Poligar's forest-produce is brought down the Animuddoo Ghaut near Shankarapooram, and supplies the taluqs of Tricoloor and Cuddalore with bamboos and building timber.

On the 10th I reached Trivanellore, proceeding *via* Tricoloor anicut. At the anicut I inspected the nurseries and plantations of Casuarina and Cocoanut in charge of the engineer of that range. The banks of the irrigation channels are all planted up; the sandy soil seems well adapted for these trees all along the banks of the Pooniar from here to the coast. It is difficult to get blocks of any size however, there being a great deal of cultivation right away. Close to the anicut on the northern bank is a small piece of waste well suited for Casuarina. It would be liable, I should say, to be flooded with a heavy fresh in the river; a bund thrown up and planted out thickly with "Nanul" would remedy this for the first few years, till the trees had taken firm hold of the ground.

On the 16th I reached Ginjee, having travelled through the Vatur Valum jungles, inspected the operations carried on, on the two reserves of Mootoocado and Padepallam, and traversed the jungles of the other three on which no planting operations had been yet undertaken. I returned to Trivanellore on the 18th, *via* Villapooram. At Trivanellore I was to meet the Collector; he had desired me to inspect and report on the site of the proposed fuel plantation in the bed of the Mullatar which I did. There is upwards of 600 acres available here for a plantation. I also examined the several lines of road for waste land for fuel sites in addition to the chief plantation in the Mullatar.

On the 23rd February I returned to Tiagurdroog, and proceeded southwards to the Virdachellam boundary of the Kallakoorchy Taluq which I skirted till I reached the Salem boundary on the 26th. On the 29th I returned, *via* Chinnasalem, to the Cusbah, and held office there till the 9th of March, when I left for Tindivanam. I reached that point on the morning of the 11th, and again left the following day for Ginjee reserves. I visited and inspected the works in every one, except Tirroovadycadoo, measured the length of fencing, estimated plants in nurseries, etc., I returned to Tindivanam on the 19th with my office, which I had had taken to Ginjee. From there despatched forest accounts and correspondence, visited the country around the town to find waste land for fuel plantations, and left on the 22nd for Mercanam on the coast; remained in camp there four days, inspecting the large extent of land (sandy waste) along the sea-coast between that place and Pondicherry; visited the Casuarina plantations near the salt-pans, the oldest of which is now about four years planted, the largest trees were about 35 feet in height with a girth in proportion, and well grown, but want attending to much. Labour seems plentiful, and it is my opinion that very large fuel plantations might be formed along the coast line with great success and at a reasonable cost. I visited the Mangoe, Illuppy, Jack, Cashew, and Cocoanut Topes near this place. Jack trees grow uncommonly well. It was the first place I had come to in the district where they were to be found of any size, if I except the *top* of the Javadimallay and the Kallakoorchy hills.

I returned to Tindivanam on the 27th, and on the 28th started for Cuddalore for the Easter Holidays, intending to take advantage of being there to procure seeds of any rare or foreign trees that might be available. Thus during the year under review, I remained in Cuddalore, the head-quarters of the district, about a week only. In fact, it is so far from my forest-work and fuel-reserves that, with the amount of personal supervision the planting and forest operations require, till the staff of Maistries, Watchman, and others become more at home in their work (they being mostly new people, and every one certainly entirely new to my system of forest improvement and supplemental planting), I can seldom go there. Tindivanam or Villapooram is more suited for the head-quarter of the Forest Officer; the former most so, if extensive plantations are formed at the coast near Mercanam. As proposed in my report for March at neither of these two places (Tindivanam and Villapooram) is there any vacant building which could be used as an office; nor, indeed, is one likely to be got at any time, unless the travellers' bungalow at either of them was to be given up; therefore a cutcha building at least would be required to be erected, which would cost about Rupees 250 or 300; and I think I should mention that a depôt for bamboos and building timber, etc., could be opened with advantage in connection with an office at Tindivanam.

By reference to my private memoranda I see that I have travelled by road (in the district) slightly over 3,400 miles during the nine months I have been on duty in the year now reported on; many of these miles were gone on foot over rough jungle-paths, and I can safely say that there does not exist a piece of jungle or forest in this range of any importance that I have not visited. The Forest Overseer has also been very active, and certainly has expended more than his monthly allowance in travelling through his charge. I believe the travelling has been somewhat carried to excess, but I was comparatively new to the district; and besides considered that the best way to make the establishment alert and check smuggling was to be every where as suddenly and frequently as it was possible.

SECTION II.

Reserves.

A. *Forest Reserves, Operations and contemplated Operations.*—The operations carried on in the year have been the reserving of all 1st and 2nd-class timber within the range for departmental felling, as was done last year, with this difference that a larger number of sorts were reserved under the 2nd class than before. Numerous saplings have been cleared around in the forests as well as many others pruned by the Peons and special labourers employed for the purpose, as also by the men employed in felling for the depôts, who have been taught to be careful of the surrounding trees when felling others for supply.

The only tract of land in which felling of any description is strictly prohibited, and in which special attention has been given to the improvement of the forest-saplings and seedlings, is the western slope of the hill of Trinomallay, on which a Watchman and an Assistant were placed in March. This solitary hill has a good deal of jungle on it, and by checking the fires and encouraging the seedlings and saplings of natural growth (and of which there are thousands, but many dreadfully scorched by fires of former years), I hope to lay the foundation for a thick forest, which I am sure will be good for many reasons: it may affect the rainfall; it will no doubt affect the springs; it will probably lower the temperature (on occasions in the hot season the wind off the hill is as the blast of a furnace), and, from a pecuniary point of view, the timber will be of value. The quantity of timber removed from the forests to depôts was cubic feet 3,630½ roundly, and consisted* principally of Vengay, Eruvady, Nunai, Neem, Acha, and Kurangali, and a few logs of large size of Nunje Cadamba, and some Teak and Satin-wood poles. The Eruvady was purchased by Pondicherry carpenters for furniture; some of the Vengay was purchased by North Arcot merchants, and about half the rest obtained purchasers from the residents. The new depôt at Trinomallay has answered very well, and has been supplied principally from the Checkady forests; the size of the largest log brought to this depôt was 22¼ cubic feet, while the largest brought to Chengum was 13 cubic feet only. There is plenty of timber of larger scantling than this, but it is impossible to get the bandy-men to cart it. I have last year recommended that a small establishment of carts and bullocks be entertained, and again alluded to it in my report for April 1872. It is useless to expect the rickety carts of the country and the country side bullocks will bring out large logs (such as would be serviceable for public works) by the jungle tracts existing, and either a carting establishment or better roads must be had for the purpose. It is proposed to reserve the "Cavatymallay" near Cusbah of Trinomallay, the "Thanemallay" plateau, and the Checkady forests adjoining the Poligar's forests, for departmental felling solely, and to place working gangs on each of them for improvement and occasional planting. Sandal-wood will become valuable on the Thanemallay plateau, if it was attended to; but so long as there is a doubt to which range it is to belong, I feel reluctant to increase the expenditure, already heavy, in comparison to the revenue. If there is to be no benefit to this range by the course, the Checkady forests could only be reserved if the scheme of leasing the Cooroomba Gounden Poligar's forests is brought to accomplishment.

* And 17 tons, 8 cwt., 24 lbs. of firewood, as exhibited in Statement B. attached.

The cost of felling and carting the above-mentioned quantity of timber and firewood to the depôts was Rupees 1,405-12-8, including depôt temporary establishment which were paid from working charges; while in addition to this sum an item of Rupees 4-1-3 appears in the annual account current under heading VII., which was incurred on Trinomallay Hill forest improvement. There is a slight increase of stock in depôts at the end of the year, and there is a good† deal in the forest yet unmeasured, for which no returns have been sent in. The depôt sales show a profit slightly in excess of the amount‡ that would have been realized by seigniorage fees, if the timber sold from depôts had been felled on licenses. The prices per cubic foot realized this year on depôt sales have been rather lower than might have been the case under other circumstances: some of the timber supplied was partially unseasoned, more was indifferently sourd,

† Exhibited in Statement D. attached.

‡ Exhibited in Statement C. attached.

and the rest was generally of small size and in very short lengths. A good deal of this poor timber had been felled before I took charge of the range, and it had to be brought in and sold at any price almost to save it from being altogether lost. I have before mentioned that logs of larger scantling could be delivered at depôts with cattle and timber carts belonging to the department than by the present means of hired country-carts; and I calculate that departmental carting would be cheaper, allowing, of course, for the usual percentage of deaths among the cattle, but not for deaths by wholesale, from disease. The local bandy-men steadily refuse to cart any but certain sized logs, and I am wholly dependent on them for depôt supply. Another probable cause of Government timber not being in much demand is, the fact of people being able to obtain tickets from the lessees of the Kallakoorchy Poligar's forests for all sorts of timber at a less rate than they could procure licenses for in those forest ranges where the license and voucher system is in full force; and such timber, of course, costs them less than similar Government timber would, for, though we may work as cheap, I scarcely think we do it cheaper than private parties can, and some profit must be realized from sales. The lessees of the Jaghire forests are issuing, and have been issuing, Permits to fell Teak and Vengay at Rupees 2¼ per bandy-load, whether squared or worked up; while all the rest of the 1st-class trees are felled on payment of Rupees 2 per bandy-load, either rough or worked indifferently. Firewood Permits are given for 8 Annas a bandy-load, and bamboo Passes for for 1 Rupee for both descriptions; this last is slightly higher than the Government charge, but, of course, does not affect timber sales.

SECTION II.

B. Fuel Reserves. Operations and contemplated Operations.—The operations on the *local fuel-reserves* have been as follow:—

At Moothenai nothing more than general supervision by forest establishment, and later by a Maistry specially appointed, has been undertaken this year, as no establishment had been sanctioned; and the question of whether the proceeds from this local reserve are to be credited to forest-revenue (the up-keep being debited to it) not having been quite settled, made me hesitate to commence planting operations there without fresh orders. The boundary was settled, and the villagers' rights investigated. They will be allowed to collect fallen wood and graze cattle some part of the year, but goats it is recommended to exclude entirely. I have not yet heard whether the proposed rules have been confirmed. The extent of this reserve will be about 4,800 acres, without counting the slopes of the hill under which it lies. A good deal of water runs through it from hill-streams which all flow into the "Cheyaur" before it reaches the North Arcot boundary beyond Canjee. It is contemplated to enclose this reserve with a strong bush-fence, the ditch and embankment; fencing partially completed at Chinnasamodrum reserve being very expensive and scarcely so much avail against cattle or other intruders as a well made thorn-fence. In addition to the fencing of it nurseries will be opened and supplemental planting commenced with the rainy season; open patches ploughed up for broad-cast sowing, and pits dug in intermediate spaces, and the whole block surveyed and a plan made. It is proposed to divide all the reserves into sections for easier conservancy and working. Each section to be marked by fences if feasible, and a Maistry and few men entertained for each under cultivation, while a Watchman or two would do well enough for the remaining section open to cattle-grazing or bamboo-felling, etc. At the Chinnasamodrum reserve a ditch, 4 feet wide and 3 deep, with the sides sloping to the bottom of it, which narrowed to 2½ feet, and the earth and rubble thrown up to form a bank on the inner side (reserve side), was dug for 6,923⅓ yards with the Collector's approval and as a boundary fence; the cost of this work was debited to Local Funds, the Collector having provided me with money for the fencing. It cost Rupees 635-14-11, and was stopped by order of the Collector (in his letter No. 311 of the 2nd August 1871, to the Conservator of Forests) till the Ginjee reserves had been fenced in; since then no boundary fencing has been carried on at this reserve. A Maistry was placed in charge in April 1871, who kept the fence in repair, cleared the saplings from creepers, etc., collected seeds and took care of the 1,074 Kat Vaghai seedlings placed along the fence embankment, and looked after the reserve generally. In October the Conservator sanctioned two Maistries for this reserve. Of the thousand and odd

seedlings grown along the fence 390 failed in February and March 1872 from the excessive heat; the remainder are very fine, some being over 4 feet high, and all well-grown and healthy. I was curious to observe how these plants would do without watering, and this accounts for the large number of casualties. Goats had nipped off the heads of many; otherwise I don't doubt but the remainder would have been still finer than they are. It is contemplated to complete the fencing and carry on similar operations as proposed for "Moothenai" reserve; the amount expended on Chinnasamodrum from forest funds is Rupees 41-3-0.

At the Annandavady reserve, which, by the lately settled boundaries, will have an area of about 1,280 acres, nothing has been undertaken beyond supervision in common with the forests of the range. No establishment for this reserve is entertained. It is the nearest of the four local fuel-reserves to the south-west line, Madras Railway, which is distant by road from it 16 miles, but the growth of timber on it is scarcely as yet suited for engine-fuel.

At the Peringalathoor reserve the boundaries have still to be definitely settled; until then no operations will be carried on. It is proposed to enlarge this reserve, there being considerable consumption of wood on this side, and also to mark out a suitable block near it. For free pass felling only for this division, this will be necessary, if the adjoining jungles are reserved for departmental working. After the boundaries have been decided it is contemplated to mark them by bush-fencing, and also to commence improving and planting operations. A Conservancy Establishment will be required for this reserve. Its extent will be about 4,800 acres.

The above four reserves, now termed local fuel-reserves, will average 18,000 acres together; the two latter might become of use for the south-west line for fuel some future date.

There is no regular establishment entertained for any of them; the two Maistries on Chinnasamodrum reserve are temporary, and paid from working charges under the arrangement that the amount disbursed for the up-keep of these fuel-reserves from the Forest Funds should be refunded to forests, if it becomes settled that Local Conservancy Funds are to be debited with the up-keep of the local fuel-reserves hereafter.

At the *Ginjee Railway fuel-reserves* the operations during the year have been carried on with some success. At the Mootacadoo reserve a large nursery was made in July, and has since been kept up for plantation supply. All descriptions of jungle quick-growing trees have been grown experimentally to find out which is best suited to these reserves, and at the same time of quickest growth. As a result I am of opinion that the best trees to attempt growing on them for fuel are the Kat Vaghai (*Acacia speciosa*), Tooranjee (*Acacia amara*), Kultooranjee (*Acacia odoratissima*), Curryvalum (*Acacia Arabica*). Casuarina and Kurkapillay will not thrive in these reserves. The soil is too hard or too stiff, and in the hot season becomes like a stone, and as dry. About 15 cawnies of scrub were cleared and pitted out; 18,819 pits having been dug in this land. The jungle trees and saplings being left to grow most carefully (in the ground taken up for supplemental planting) when of a sort useful for fuel. Two reservoirs (ancient stone-built places, made when the land was all under cultivation hundred of years ago, I suppose) were deepened to obtain sufficient water for the young trees during the hot season, for, from being planted rather late, they required plenty of it to keep them alive; and the cost of steadily watering has formed a large item in the expenditure on this reserve, and which, I hope, will not be so heavy the next year. 8,347 seedlings were planted out during the monsoon, the nursery ran short; otherwise more would have been put down; the nursery was only commenced in July; owing to my unfortunate illness in May valuable time was lost. 1,560 casualties occurred in the planting, of which 724 were again planted up. 359 yards of strong bush-fencing was run on the side of the plantation nearest the road. It is proposed to extend the work in a similar manner next season, commencing several new openings at either end. The expenditure on this reserve during the year has been Rupees 496-13-0, including pay of the Maistry in charge.

At the Padepallam reserve a nursery was formed and fenced around; one well was cleared out. 1,300 pits dug in four cawnies of land which had been cleared of scrub. No plants were put down as the season had gone by, and the plants were very small.

It is contemplated to carry out planting operations largely next season. The expenditure has been Rupees 99-7-6, including the pay of the Maistry who has been also engaged in patrolling and protecting the remaining reserves of Periamoor, Cottamungalum, and Sirravadycadoo, on which no planting operations have been yet commenced. It is contemplated to work these also, and the report for 1872-73 should show progress in this respect. The fencing of these Ginjee reserves cannot be carried on regularly till the boundaries have been definitely settled and grazing rights decided; this will be done shortly, the Head Assistant to the Collector having visited the reserves lately for that purpose. I consider it will be useless to put an expensive fence (ditch and embankment) around these blocks. A fence sufficiently strong to withstand ordinary cattle-inroads will be ample, and as an additional precaution to them, the portions taken up for planting and improvement might be fenced also. I understand that cattle will have to be allowed pasturage within these reserves, as great numbers are driven to these hills from the eastern taluqs for pasturage while the crops are growing and grazing land scarce. As soon as the boundaries have been decided I propose to chain survey them, and make plans of each. I have suggested that the whole of the jungles in the Ginjee division should be reserved for Railway fuel, when persons who now take out licenses and tickets would have to procure their fire-wood from the Kallakoorchy or Trinomallay Taluq, but have been informed it cannot be done at once, nor without mature consideration. The Ginjee reserve establishment has been two Maistries throughout the year. With extended operations a Maistry for each opening with two monthly Gardeners would be necessary. The amount entered in the Annual Account Current, as expended on plantations, includes the above expenditure on fuel-reserves, and the item of Rupees 15-12-0, placed under heading II., should also be reckoned, as a portion of reserve and plantation expenditure for it was incurred for tools which were required for reserve-work.

SECTION II.

C. Plantations, Operations and contemplated, Operations.—These have been as follows:—At Chengum depôt near the Cheyaur a small piece of land was fenced in and pitted out, and a nursery established; this was more for experimental growing and to teach the new men employed for reserves, etc. The piece contains about 2¼ cawnies. 2,200 pits were dug; 1,200 seedlings put down. The descriptions were Neem, Illuppy, Satin-wood, Casuarina, Taiton, Agany, Connay, Joundel, Mundivicottay, Mangoe, Tamarind, Sharang Cuttay, Mungpoongen, Jack, Katvaghai, Maroothey, Toorangee, Vengay, Naghai, Pinnay, Mial Couny, Yetty, Curryvalum, Kurkapillay Wood-apple, Vel Valums, Sara Conny, Jei, Acha, etc., etc. 265 casualties occurred which have not been re-placed; the remaining plants are healthy but small; much watering was necessary; the soil is not very good, but the plantation is useful as a training school. The nursery has been kept up, as villagers may be induced to take the plants for their fields and fences. I have had a considerable number of flower-pots of small dimensions made and establish seedlings in these, and find that they are very successful when planted out into pits; the expenditure entered for this plantation is Rupees 101-4-11. No operations are contemplated beyond supplying vacancies as they occur and cultivating the trees already in the ground. There is still left a small portion unpitted which will be planted out; the place will require a couple of gardeners to attend to the watering, etc. At a short distance from Chengum there is a block of 160 acres suited for fuel plantation which I have not taken over, and another of 13 cawnies extent on the bank of the Cheyaur suited for Casuarina, which I propose to take over and plant up next season.

At the Trinomallay timber yard the logs are affected by the intense heat, and I therefore dug 272 pits in a triple line around the inner side of the fence, and planted 246 of them with Kat Vaghai, Illuppy, Neem and Naghai, and along the fence grew Kurkapillay seed; they are all doing very well, some have grown immensely. Seven casualties occurred which were re-placed. There is a well in the yard, and watering was therefore facilitated. The expenditure on this work was Rs. 14-2-6; the up-keep of these plants only is contemplated at this place, but at Mercanum it is contemplated to form large fuel plantations as well as near Villapooram, Trivanellore, Tindivanam and Ginjee; sites have been selected at all of these places, but have not been examined thoroughly

for quantity of land available at them. The amount placed against "Plantations" in the annual account is Rupees 752-15-5, which, as I have above stated, includes all the expenditure on reserves as well.

SECTION III.

License and Voucher Forest Operations and contemplated Operations—In all the range there are no forests specially set apart for license and voucher felling, any more than there are any specially reserved for departmental felling; but licenses are only supplied for jungle-wood or 3rd-class timber, and the holders of these licenses are at liberty to fell in any of the forests open for felling in, and accordingly suit their own convenience as to which forest is to be named in their felling Permit. There is no doubt that timber, etc., felling, on license and tickets should in every forest be overlooked by some one of the conservancy establishment, but at present it is not strong-handed enough to allow of it, and the most that can be done is to patrol the jungles and forests from time to time, and check the removals when brought out of the forests to the stations fixed in the Pass. It is *in* the forests and *by* the wood-cutters that the greatest damage is done to the surrounding trees and saplings by careless felling, and if I had enough men I would at once apportion the forest amongst rangers who should accompany the wood-cutters on every occasion or at least be present on the ground where felling is allowed. Bamboos might always be removed on license, whether growing in reserves or not, for they grow so quickly that the felling of them under supervision, even in reserves, cannot injure their re-productive powers or hurt the rest of the trees. The bamboos on the Javadimallay are seeding generally now, and the only condition that need be made regarding the felling of bamboos in that direction would be to stop the cutting for a few months till the seedlings had had time to send down their roots well into the soil, and after that the sooner the old stems are cut the better, as I have observed that they dry up in the next season to their seeding, and become useless except for fuel in a short time after that. The license and voucher system continues to be in force, though in a limited manner, and though it is the order of Government that the license and voucher system should be done away with as soon as may be. It has been found, however, that to supply the depôts with any stock of jungle-wood or perishable timbers, such as the ryots of the district are in the habit of removing on licenses, would entail considerable risk of a large deficiency in value of stock occasionally occurring by the wood so stored not obtaining an immediate sale, and depreciating in value by decay, etc., and therefore the system continues for certain sorts of perishable woods only and bamboos. It is contemplated to open a depôt at Tindivanam for sale of bamboos, timber, and jungle-produce (fruits, etc.). Bamboos obtain a ready sale there, and they can be felled and carted from the Checkady and Javadi forests to that town for a cost of Rupees 10½ per bandy-load departmentally, while the lowest price realized has been Rupees 11 the bandy-load in the town, and sometimes it goes as high as Rupees 13. A timber yard in connection with the Assistant Conservator's Office would answer well, as the depôt establishment cost would then be trifling (about Rupees 4 per month perhaps for a Watchman or Gate-keeper). In July next, the year will have elapsed and then several firewood jungles in the Trinomallay Taluq will be closed, and the next in succession opened to felling as usual. The quantity of timber, etc., removed on licenses and tickets is given in Statement E. attached. No expenditure was incurred beyond the percentage of the cost for forest conservancy establishment for the year, which, however, will not constitute an item for entry under A. in the annual account current.

SECTION IV.

Yield of Forests, Expenditure on Felling, Carting, etc.—The yield of the forests during the year 1871-72 was 35,868¼ cubic feet of timber; of this quantity 21,526 was removed on free passes. The value of timber, etc., removed on this system is given in Statement G. attached, as well as the quantities of each description of produce. I will merely remark that free felling seems, by the results of the year, to be on the increase; the value roughly of timber, etc., removed in 1870-71, was Rupees 950; this year it has reached Rupees 2,206, and besides this free felling on passes (for building materials and agricultural implements, etc.), there are large quantities of

fire-wood removed on head-loads without restriction by ryots. The expenditure of felling and carting to depôt was Rupees 1,407-8-8, and was previously stated in Section II A. of this report.

SECTION V.

Financial Results.—The financial results given in Statement A. attached to this exhibit a sum of Rupees 974-0-0 against the forests for the year 1871-72. The expenditure on several heads has been much increased since I took charge in November 1870, as will be seen from the same statement for the previous year; while, on the other hand, the revenue has not much improved, but will, I hope, be larger by next year (if the establishment is increased in time to admit of my proposals for better conservancy being put into effect). Nevertheless, a large revenue will never be attained in this district till reserves and plantations begin to return the outlay on them, and the locally conserved jungles are placed under the special department. The present revenue (forest) is derived entirely from the Trinomallay Taluq forests and jungles which are not large, fine, nor compact; and if the Tricaloor jungles*, the Tindivanam jungles,* and the Villapooram jungles* were placed under the charge of the forest officer, and a small establishment for each taluq sanctioned, and the jungle-revenue from them credited all under one head (forest), one might hope to see the total for this year's receipts at least trebled. The Kallakoorchy Taluq is placed already under the special department, but there is very little jungle in it, and people would never think of taking out tickets or licenses for fire-wood, etc., and pay Rupee 1 a bandy-load, when they can get their wants supplied from the Poligar's jungles for half the amount, even if they did not go and cut it for nothing in the Tricaloor Taluq, where I am informed jungle conservancy does not exist, nor is any revenue derived, or any rules for protection of the jungles in force, except in some† village lands lately transferred to Tricaloor from the Villapooram Taluq.

* These jungles may be termed fire-wood jungles.

† 54 villages.

SECTION VI.

General Remarks.

Conduct of the Subordinates of the Establishment; Health of the Establishment.—I have'nt much to remark under this Section, having already remarked on matters, perhaps, sufficiently. The conduct of the people has been good, with two exceptions; the exceptions were Peons who, in one case, disobeyed most strict and special orders‡ of his range officer, and the other was found absent from his post without his having reported the matter to the Forest Overseer, though the Peon actually was in the village of Chengum, and must have seen that officer frequently; he had been stationed in Kallakoorchy Cusbah, and was away for eleven days before it became known; he was not sick, but simply some ordinary private affair apparently induced him to absent himself. The Overseer has been active and careful in the performance of his range work, but his accounts are occasionally late in despatch to my Office, and this necessarily throws my own returns behind hand. The Forest Overseer cannot properly look after more than his forests in Trinomallay Taluq, and a Reserve Manager or Overseer and a Plantation Manager are absolutely necessary to carry on operations satisfactorily. For myself I have time for nothing scarcely what with no office or office establishment, and so much personal supervision required on the works in hand; and I regret most of all that I absolutely cannot command an hour a day to the necessary grammatical study of the Vernacular of the district. The health of the establishment has been tolerably good. The forest-offences tried within the year were fifteen in number; of these seven were theft, seven mischief, and one trespass; and five were tried before the Sub-Magistrate of Kullakoorchy Taluq, two before the Sub-Magistrate of Chengum Division, and two before the Taluq Magistrate of Trinomallay, and six before the Sub-Magistrate of Ginjee Division; twelve obtained conviction, viz., four theft, seven mischief, and one trespass; seventy-five persons were concerned in the charges, fifty-six were punished with fines, imprisonment, simple and rigorous; the heaviest punishments being three weeks' rigorous, and in fines 40 Rupees; the aggregate of fines was

‡ Regarding checking of timber brought out of forests on licenses.

Rupees 129. The value of the timber smuggled or injured has not been recorded separately for comparison with the punishments. The amount of sale-proceeds from confiscations with the quantity and description of the articles is shown in Statement F. attached. Most of this was confiscated departmentally; the establishment being few enough to look after the forests prohibits me from sending them as witnesses in any trivial case, or if it is a doubtful one. A few maunds of Kaduka nuts were collected and some barks, Valum and Sellay. They obtained no sale in the jungle taluqs naturally, and for all products of this description a depôt in a large town should be kept. There are several valuable products to be met with in these jungles, and I hope to collect some of them. Valum bark is in some demand for distilling, but it is getting rather scarce. I would recommend a few tracts of a soil, such as the land around the water spread of tanks would be, clayey for instance, be taken up for the cultivation of this tree departmentally. The Sappan dye is cultivated in some villagers' gardens, and might be tried also. There are 18,000 acres of local fuel-reserves, 12,000 acres* railway fuel reserves at Ginjee; another block of 8,000 acres, I think, will be found available in the Gungavaram jungles, south of Pakkum Hills for railway fuel. At the Mullatar about 600 acres, it is expected, will be available, and it is proposed to apply for 5,000 acres at the coast for fuel plantations; these, together with about 1,000 acres, at odd places, will give an area of 70 square miles of reserved and plantation land in the district for fuel planting operations to be carried on in. I propose to introduce bamboos and other building timber to the Ginjee jungles.

* Ginjee reserves are roughly calculated to contain 1,500,000 feet of timber, but not all suited for fuel (engine).

I have the honour to be,
Sir,
Your most obedient servant.

(Signed) H. L. WOOLDRIDGE,
Asst. Conservatorof Forests, South Arcot.

STATEMENT A.

Showing Receipts and Charges of the South Arcot Forests for the official year 1871-72.

	Rs.	A.	P.	Rs.	A.	P.
Receipts.						
I.—Sale of timber and Sandal-wood brought to depôts by Government agency	1,711	8	7			
2. Value of timber supplied to Public Departments	.....					
II.—Sale of timber, fire-wood, bamboos, and charcoal removed from the forests by purchasers, including seigniorage	3,033	13	0			
2. Sale of confiscated timber, deducting 50 per cent. of the sale-proceeds paid to the informants of clandestine felling—*vide* G. O. No. 921, dated 4th May 1865	75	13	7			
VI.—Sale of fruits, barks, and other minor forest-produce	.....					
Miscellaneous Receipts	.....			4,821	3	2
Expenditure.						
A.—Conservancy and Working.						
I.—Timber expenses for felling, cutting, clearing, sawing, and transport of timber by land or water to depôts; also charges for storing, securing, watching, piling, and arrangements for selling timber	1,407	8	8			
II.—Purchase of tools	14	0	0			
III.—Feed and keep of elephants and cattle	.....					
IV.—Rent of leased forests and seigniorage paid for timber felled in leased forests	.....					
V.—Charges connected with the collection of revenue on fruits	15	5	6			
VI.—Plantations and Reserves	752	15	5			
VII.—Forest-works, viz., cutting creepers, protection of forests or trees against fire, and other work for the conservancy and improvement of the forests	4	1	3			
VIII.—Forest survey	.....					
IX.—Experiments to test the value of timber	0	14	0			
X.—Communications, buildings, and minor works, fences, boundary pillars, posts and paths	67	7	8			
Total of Conservancy and Working...	2,262	4	6			
B.—Establishment.						
I.—Salaries	2,795	5	4			
II.—Travelling Allowances	650	0	0			
III.—Contingencies	77	9	10			
Total Establishment...	3,532	15	2	.....		
Total of Expenditure...	.....			5,795	3	8

STATEMENT B.

Exhibiting in detail the Extent of departmental Felling during the year 1871-72 *in South Arcot Forests.*

Division or Range.	Description of Timber and other Forest-produce.	Quantity of Timber, etc., felled.			Rates of Valuation.			Total Valuation.
		Number of Cubic Feet.	Number of Maunds (25 lbs.)	Number of Tons.	Per Cubic Foot.	Per Maund of 25 lbs.	Per 1,000 lbs.	
1	2	3			4			5
		C. FT. IN. PTS.	MD. LBS.	T. CWT. LBS.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
Trinomallay Division..	Teakwood	15 10 0	.....	.....	0 12 0	.....	.....	11 14 0
	Acha...	38 8 10	.....	.....	0 12 0	.....	.....	29 0 10
	Vengay	265 4 5	.....	.....	0 12 0	.....	.....	199 0 5
	Karungali...	965 8 8	.....	.....	0 12 0	.....	.....	724 4 8
	Satin-wood	49 5 1	.....	.....	0 12 0	.....	.....	37 1 1
	Eruvady...	198 5 10	.....	.....	0 12 0	.....	.....	148 13 10
	Kallemareethey	14 5 3	.....	.....	0 12 0	.....	.....	10 13 3
	Kultoorangee	105 10 1	.....	.....	0 12 0	.....	.....	79 6 1
	Parambai	169 4 8	.....	.....	0 12 0	.....	.....	127 0 8
	Jalari...	14 0 4	.....	.....	0 12 0	.....	.....	10 8 4
	Sellay	123 5 9	.....	.....	0 12 0	.....	.....	92 9 9
	Nunai	1,255 2 9	.....	.....	0 12 0	.....	.....	941 6 9
	Vemboo	342 10 5	.....	.....	0 12 0	.....	.....	257 2 5
	Munjikadembai	71 8 7	.....	.....	0 12 0	.....	.....	53 12 7
	Fire-wood...	.....	.....	17 8 24	.....	.....	2 8 0	97 8 0
	Total...	3,630 6 8	.....	17 8 24	.....	.....	.....	2,820 6 8

STATEMENT C.

Exhibiting in detail the Sales from each Depôt of South Arcot Forests during the year 1871-72.

Name of Depôt.	Description of Timber or other Forest-produce.	Quantity of Timber, etc., sold.			Rates of Valuation.			Total Valuation.	Total Amount actually realized.	Difference between Columns 5 and 6.	Explanation of Difference.
		Number of Cubic Feet.	Number of Maunds.	Number of Tons.	Per Cubic Foot.	Per Maund of 25 lbs.	Per 1,000 lbs.				
1	2	3			4			5	6	7	8
		C. F. PTS.	MDS. LBS.	TONS. CWT. LBS.	RS. A. P.	Rs. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	
Chengum ...	Teakwood	29 7 4	.....	.....	0 12 0	.....	.....	22 3 4	34 7 0	+ 12 3 8	Large sales from private forests have had a tendency to reduce the price of timber in the local markets. Another cause was that from no large stock of timber being in hand, unseasoned timber was brought for sale to meet the demand, and which could fetch high rates equally with seasoned wood; another cause of decrease by amount realized is the fact that all the timber in market depôts has been *valued* at 12 Annas per cubic foot heretofore, and the same rate of valuation has continued by me; but as the timber for which there is most demand has only a local market value of from 8 Annas to 10 Annas per foot, it becomes evident that the larger the sales of those sorts the greater will be the difference by sales actually realized to that of valuations. It is proposed to calculate the value of timber stock in hand in future at specific rates for each description of wood; these rates to be determined with reference to the ruling local market prices.
	Vengay.....	166 2 0	.....	.....	0 12 0	.....	.....	124 10 0	114 4 0	— 10 6 0	
	Karungali.....	4 8 8	.....	.....	0 12 0	.....	.....	3 8 8	2 15 3	— 0 9 5	
	Eruvady	202 3 7	.....	.....	0 12 0	.....	.....	151 11 7	114 7 2	— 37 4 5	
	Kulturanjee.....	15 9 7	.....	.....	0 12 0	.....	.....	11 13 7	9 13 1	— 2 0 6	
	Parambai.....	26 6 0	.....	.....	0 12 0	.....	.....	19 14 0	14 14 7	— 4 15 5	
	Sellay	116 7 0	.....	.....	0 12 0	.....	.....	87 7 0	65 9 4	— 21 13 8	
	Kalleemurthey...	68 10 2	.....	.....	0 12 0	.....	.....	51 10 2	43 0 6	— 8 9 8	
	Nunai	892 2 4	this item includes cubic feet 8-9-2 of Karindoombai		0 12 0	.....	.....	669 2 4	390 14 8	—278 4 1	
Trinomallay.	Teak-wood	29 11 10	.....	.....	0 12 0	.....	.....	22 7 10	37 7 9	+ 14 15 11	
	Acha.....	245 2 10	.....	.....	0 12 0	.....	.....	183 14 10	229 5 9	+ 45 6 11	
	Karungali	521 6 2	.....	.....	0 12 0	.....	.....	391 2 2	375 2 7	— 15 15 7	
	Satin-wood	51 1 7	.....	.....	0 12 0	.....	.....	38 5 7	39 15 2	+ 1 9 7	
	Munji Kadembai	61 11 11	.....	.....	0 12 0	.....	.....	46 7 11	44 9 1	— 1 14 10	
	Vemboo	126 7 6	.....	.....	0 12 0	.....	.....	94 15 6	85 1 1	+ 9 14 5	
	Kulturanjee ...	3 3 10	.....	.....	0 12 0	.....	.....	2 7 10	2 7 10	.....	
	Parambai.....	100 4 2	.....	.....	0 12 0	.....	.....	75 4 2	75 4 2	.....	
	Fire-wood	.....	.....	5 13 94	.....	.....	2 8 0	31 14 0	31 14 0	.....	
	Total...	2,662 10 6	.....	5 13 94	.....	.....	2 8 0	2,029 0 6	1,711 8 7	.....	
	Total showing aggregate decrease.	.....	.....	.....	.....	.....	.....	.....	.....	317 7 11	

STATEMENT D.

Exhibiting Particulars of Stock in Hand at the Commencement and Close of the official year 1871-72, *in the Depôts of the South Arcot Forests and showing Increase or Diminution.*

Description of Timber or Forest-produce.	Quantity of Timber, etc., in Hand.			Rates of Valuation.			Total Valuation.	Total.
	Number of Cubic Feet.	Number of Maunds.	Number of Tons.	Per Cubic Foot.	Per Maund of 25 lbs.	Per 1,000 lbs.		
1	2			3			4	5
Stock on 31st March 1871.	C. FEET. IN. PTS.	MDS. LBS.	TON. CWT. LBS.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	
Nunai-wood	441 10 10	.....	.....	0 12 0	.....	.....	331 6 10	
Acha-wood...	205 9 3	.....	.....	0 12 0	.....	.....	154 5 3	
Teakwood	43 9 2	.....	.....	0 12 0	.....	.....	32 13 2	
Satin-wood...	9 0 11	.....	.....	0 12 0	.....	.....	6 12 11	
Karindoombai	63 0 6	.....	.....	0 12 0	.....	.....	47 4 6	
Stock on 31st March 1872.								
Karungali	438 9 2	.....	.....	0 12 0	.....	.....	329 1 2	572 10 8
Vengay	99 2 5	.....	.....	0 12 0	.....	.....	74 6 5	
Satin-wood...	7 4 5	.....	.....	0 12 0	.....	.....	5 8 5	
Kaliee Marethey	14 5 3	.....	.....	0 12 0	.....	.....	10 13 3	
Kultooranjee	17 10 6	.....	.....	0 12 0	.....	.....	13 6 6	
Jalari	14 0 4	.....	.....	0 12 0	.....	.....	10 8 4	
Nunai	864 3 0	This item includes C. feet 54-3-4 of Karindoombai		0 12 0	.....	.....	648 3 0	
Parambai	49 4 3	.....	.....	0 12 0	.....	.....	37 0 3	
Vemboo	216 2 10	.....	.....	0 12 0	.....	.....	162 2 10	
Munjikadembai	9 8 8	.....	.....	0 12 0	.....	.....	7 4 8	
Fire-wood	... ...	.....	11 14 42	0 12 0	.....	2 8 0	65 10 0	
Total...	2,494 9 6	.....	11 14 42	... ...	.....	.....		1,364 0 10
							Total...	1,936 11 6
Add total valuation of Timber and Forest-produce felled during the year as per column 5, Statement B...							.....	2,820 6 8
							Grand Total...	4,757 2 2
Deduct total valuation of timber, etc., sold during the year as per column 5, Statement C. ...							.....	2,029 0 6
							Compare remainder with total under column 4...	2,728 1 8
							.....	1,936 11 6
							Gives value of increase of stock ...	791 6 2

STATEMENT E.

Exhibiting Quantity of Timber, etc., disposed of under License and Voucher System during the year 1871-72, *from the South Arcot Forests.*

Description of Timber or Forest-produce.	Quantity of Timber, etc., disposed of by License System.				Rates of Seigniorage or Sale.				Total Receipts under each Heading.	Remarks.
	Number of Cubic Feet.	Number of Maunds.	Number of Tons.	Number of Bandy-loads.	Per Cubic Foot.	Per Maund of 25 lbs.	Per 1,000 lbs.	Per Bandy-load.		
1	2				3				4	
	C. FEET. IN. PTS.	MDS. LBS.	TONS. CWT. LBS.	B.-LOAD. HEAD-L.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	
Reserved timber	476 0 0	.....	.....	... ...	0 3 0	.....	.....	.....	89 4 0	Consisting of head-loads of Satin-wood and Vengay which *bonâ fide* ryots are allowed to cut on payment of 3 As. per head-load for agricultural implements only.
Unreserved (worked up)...	1,156 0 0	.....	.....	... ...	0 2 0	.....	.....	.....	144 8 0	
Do. (squared) ...	200 0 0	.....	.....	... ...	0 1½ 0	.....	.....	.....	20 0 0	
Do. (rough)	8,380 0 0	.....	.....	... ...	0 ¼ 0	.....	.....	.....	444 0 0	
Valum bark	.....	2,040 0	.....	... ...	.....	0 1 8	.....	.....	127 8 0	
Avaram	.....	29,000 0	.....	... ...	.....	0 1/16 0	.....	.....	543 12 0	
Fire-wood	.....	.....	220 10 80	... ...	.....	.....	1 0 0	.....	494 0 0	
Do.	.....	.....	1 8 64	... ...	.....	.....	0 15 0	.....	3 0 0	
Charcoal	.....	.....	4 9 32	... ...	.....	.....	1 0 0	.....	10 0 0	
Do.	.....	.....	2 3 24	... ...	.....	.....	1 4 0	.....	60 8 0	It will be observed that Charcoal seigniorage fee is the same as for fire-wood nearly. As about 3½ bandies of wood are requisite to make 1 bandy of Charcoal, it would be advisable to raise the seigniorage charge for the latter in proportion, or decrease the charge on the former; to raise the fee on bandy-loads of Charcoal would be, I imagine, most suited to the want.
Split bamboos	.....	.....	.....	128 17	.....	.....	.....	1 4 0	161 1 0	
Bamboos	.....	.....	.....	1,150 0	.....	.....	.....	0 12 0	862 8 0	
Do.	.....	.....	.....	108 8	.....	.....	.....	0 10 0	67 12 0	
Do.	.....	.....	.....	4 0	.....	.....	.....	1 8 0	6 0 0	
Total...	10,712 0 0	31,040 0	228 11 88	1,390 25	.....	.....	.....	.....	3,033 13 0	

Exhibiting in detail, the Description and Quantity of Timber, &c., confiscated and sold during the year 1871-72 *in the South Arcot Forests.*

Description of Timber or other Forest-produce.	Quantity of Timber, etc., confiscated.				Valuation.	Amount realized by Auction Sale.	Amount of Contingent Expenses and Rewards to Informers.	Amount credited to Forest Revenue.
	Number of Cubic Feet.	Number of Maunds.	Number of Tons.	Number of Bandy-loads.				
1	2				3	4	5	6
	C. FT. M.	MDS. LBS.	TONS. CWT. LBS.		RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
4 logs of Acha, 5 Vengay logs, 1 Eruvady log, and 6 Karungali	32 0 0	.....	.....	.....	6 4 0	14 13 0	7 14 6	6 14 6
21 Satin-wood poles	60 0 0	.....	.....	.....	23 0 0	34 5 0	11 2 6	23 2 6
16 Kaltoorangee logs...	60 0 0	.....	.....	.....	20 0 0	28 10 0	11 2 6	17 7 6
1 Illupay log, 1 Neam log, 4 Satin-wood poles, 1 Kultoorangee log, 2 Kallee Acha, 1 Nunai log ...	30 0 0	.....	.....	....	4 0 0	9 0 0	... ...	9 0 0
4 Palai logs, 26 rafters jungle-wood.	30 0 0	.....	.....	.....	2 8 0	5 2 0	0 7 6	4 10 6
Fire-wood	.....	.....	6 15 80	.....	8 0 0	16 14 3	1 11 8	14 10 7
Total...	212 0 0	.....	6 15 80	.....	63 12 0	108 12 3	32 6 8	75 13 7

Showing Quantity and Value of Timber, etc., removed from South Arcot Forests by Ryots on free Passes during 1871-72.

Months.	Particulars of Timber, etc., removed.					Value (as per Seigniorage Fees.)					Total Value of each Month's Removal
	Timber.		Bamboos.		Fire-wood.	Per Cubic Foot.		Per Bandy-load.		Fire-wood per 1,000 lbs.	
	Reserved.	Unreserved.	Split.	Rough.		Reserved.	Unreserved.	Split.	Rough.		
1	2					3					4
1871.	C. ft.	C. ft.	B. load.	B. load.	Ts. cwt. lbs.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
April and May ...	Nil.	Nil.	Nil.	Nil.	Nil.	.....	.....	.....	.....	.....	Nil.
June	290	10,695	20	154	74 2 16	0 2½ 0	0 ¼ 0	1 4 0	0 12 0	1 0 0	884 12 0
July	...	3,740	21	23	5 7 16	... ...	0 ¼ 0	1 4 0	0 12 0	1 0 0	242 8 0
August	110	1,370	13	18	.....	0 2½ 0	0 ¼ 0	1 4 0	0 12 0	.....	114 12 0
September	1	...	2	...	.....	0 3 0	... ...	1 4 0	.....	.. ..	2 11 0
October	...	80	...	4	4 0 40	.....	0 ¼ 0	.....	0 12 0	1 0 0	16 0 0
November	...	...	...	...	2 13 6	.....	... ...	.....	.....	1 0 0	6 0 0
December	...	40	8	4	34 7 56	.....	0 ¼ 0	1 4 0	0 12 0	1 0 0	92 0 0
1872.											
January	...	40	21	32	66 1 48	.....	0 ¼ 0	1 4 0	0 12 0	1 0 0	200 4 0
February	1,540	2,600	4	144	29 9 32	0 2½ 0	0 ¼ 0	1 4 0	0 12 0	1 0 0	540 0 0
March	...	1,020	2	5	22 6 48	.....	0 ¼ 0	1 4 0	0 12 0	1 0 0	107 4 0
Total...	1,941	19,585	91	384	238 7 38	.....	.....	.....	.....	.....	2,206 3 0
	...	1,941	...	91	Tons of fire-wood.	.....	.....	.....	.....	.....	....
Grand Total Timber.	...	21,526	Bamboos 475 bandy-loads.			.....	.....	.....	.....	.....	.....

Note.—*Ryots are allowed to remove head-loads of fire-wood without a Pass*; therefore no record of the quantity so removed can be kept; but from all accounts a great deal of wood is thus taken out.

Camp at Chengum,
2nd June 1872.

(Signed) H. L. WOOLDRIDGE,
Assistant Conservator of Forests.

APPENDIX G.

MADURA, 17*th May* 1872.

From

R. WILLIAMS, ESQ.,
Acting Deputy Conservator of Madura, etc., Forests.

To

MAJOR R. H. BEDDOME,
Conservator of Forests.

SIR,—I have the honour to submit the Administration Report of the Madura Forests for the official year 1871-72.

Tours of Officer in charge.

1. I assumed charge on 8th June 1871, and remained at Head Office bringing up arrears and mastering office routine for first month and a half. I have since travelled a great deal, and visited the various tannah in the district.

Plantations.

2. *Plantation No. I., Vumathiparai.*—In this Plantation 300 pits were dug, and the same number of seedlings put out during the year. There were 2,570 teak trees at the end of last year planted both in 1869-70 and 1870-71; 300 were added to the above on account of trees planted in 1871-72. Altogether out of 2,870 trees planted 65 casualties occurred, and the remaining 2,805 are in good condition. The expenditure during the year amounts to Rupees 120-10-0, and the total from the commencement up to 31st March 1872, Rupees 737-11-7. 200 teak seedlings are ready in the nursery for transplanting. Some twenty of the finest of these trees measure 20 feet in height, and have a girth of 9 inches. About a thousand range from 4 feet to 16 feet in height, and from 2 inches to 9 in girth. The remainder, about 1,800 in number, are not over 2 feet in height.

3. *Plantation No. II., Kodikannel.*—This Plantation has been sub-divided into (A) Acacia, and (E) Eucalyptus. 500 pits have been dug; 995 seedlings, viz., 888 Acacia, and 107 Eucalyptus, planted out during the year. There are now 2,213 Eucalyptus, and 1,667 Acacia trees in the two plantations planted both in 1870-71 and 1871-72. The expenditure during the year has been Rupees 340-7-2, and the total from the commencement up to 31st March 1872, Rupees 1,005-7-2. 1,640 Acacia and Eucalyptus seedlings are available in nursery beds for transplanting. The Eucalyptus range from 2 feet to 1 foot in height, and the Acacias from 7 feet to a few inches. The inhabitants of Vilputty have applied through the Deputy Tahsildar of Pulney Hills, requesting to sell them 50 young plants of Bluegum trees, which I agreed to give them at the rate of 1 Anna each.

4. *Plantation No. III., Pulney Taluq.*—In this Plantation 1½ gulies of jungles have been cleared, 915 pits dug, and 965 trees planted during the year (including 50 trees replanted for casualties that occurred among those planted in the year 1870-71). There are now 1,115 trees in the plantation planted both in 1870-71 and 1871-72. The expenditure during the year has been Rupees 114-12-5, and the total from the commencement up to 31st March 1872, Rupees 234-12-5. This plantation promises to be a great success, as some of the trees measured in September and found to be 17 feet in height are now 25 feet, showing a growth of 8 feet in seven months. It would therefore seem advisable to extend this plantation greatly.

Reserved Forests.

5. The Reserved Forests of Pareacolum and Pulney are worked departmentally by means of Contractors who fell timber selected by the officers of the department, and deliver it at the depôts.

6. One great evil we have to contend with is smuggling, and as in very many places our forest boundaries march with those of the Zemindars, such as the Vaylur Mitta or Minakshi Devastanum, or again with the Travancore Forests along the whole line of the Cumbum Valley, detection is most difficult, and a conviction scarcely to be procured.

7. In the month of August I took charge from the Revenue authorities of a portion of the Panjantangy Mullay that lies in Madura; this is being kept as an open fuel reserve; but as I have hitherto been able to conduct fencing operations very cheaply and efficiently in that part of the country, it is my intention on my next tour to consider whether it will not be advisable to fence this in too; the advantage being a saving in watching charges, and avoidance of irritation caused by frequent prosecutions of owners of cattle who are constantly tempted to trespass while the reserve is left open.

8. Burning of forests is most difficult to prevent, yet the resulting good to the ryots bears no proportion to the injury inflicted on the forests; and, in fact, if by any unforeseen accident they were entirely deprived of these grazing grounds it would probably result in a great improvement in the breed of cattle, as they would rear no more than they could profitably employ and provide for. I do not, however, suppose it possible to get the ryots to believe this, and the forests are fired in every direction in this district. Scorching all trees to a height of 30 and 40 feet, and, of course, warping and stunting the growth of most. Detection of offenders in this way can only be accidental.

License and voucher system.

9. Under the License and Voucher system the outturn of the Madura Range has been 11,574 cubic feet of timber, selling for Rupees 885-4-0; 2,977 tons of firewood, selling for Rupees 5,851-1-0; 697 cart-loads of charcoal, selling for Rupees 699-7-0: and in the Pareacolum Range, under the same system, 11,770 cubic feet of timber were sold for Rupees 852-6-7; 400 tons of firewood for Rupees 817; 62 cart-loads of charcoal for Rupees 51-13-0; and 1,653 cart-loads of bamboos for Rupees 1,845-14-6—deducting the 10 per cent. commission paid to Nattamgars, this leaves as a net result Rupees 6,762-8-7 for Madura Range, and Rupees 3,261-14-1 for that of Pareacolum.

10. At Kodikannel, 3 trees and 1 branch, containing 8 bandy-loads of wood, were sold having fallen down, and 43 felled and removed on license.

Yield of Forests.

11. The quantity of timber brought to the various depôts of the Pareacolum Range during the year under review was 4,797 cubic feet, of which 1,479 cubic feet were the produce of forests in the vicinity of Pulney, and 15 cubic feet in Pareacolum, and 3,303 cubic feet of those in the Cumbum Valley. This, in addition to the 23,344 feet of timber, 3,377 tons of firewood, 1,653 bandy-loads of bamboos, and 758 bandy-loads of charcoal already enumerated, is taken out under the license and voucher his system.

Proposed operations.

12. I am of opinion that it will be well to push on the growth of young trees. The effective conservation of the fuel reserves and planting up of all bare spaces in them will demand much attention. As the demand for timber at present seems very limited, I am not inclined to extend felling operations.

13. Forest produce has brought no revenue.

14. No timber was supplied to the Department Public Works.

Collection of Specimens, etc.

15. Specimens of sholah trees from the Travancore Hills above Tavarum and Bodenaikanur have been submitted to the Conservator for examination, the Acting Deputy not having either the technical knowledge or the instruments to enable him to pronounce on their novelty or rarity.

Health of Establishment.

16. Health has been good on the whole. Sundry cases of fever being the only serious instances of disease among the establishments.

17. Overseer P. Rungiah Naidoo, in charge of Paroacolum Range, has not altogether given me satisfaction, having a somewhat perfunctory manner of performing his duties, and not showing sufficient care in obtaining value for money expended in labour.

General Remarks.

18. Acting Overseer Subbien, in charge of the Madura Range, has pleased me better; there is a thoroughness in his work, of which I approve.

19. But little has been done in the way of surveying and demarcating, owing to a great pressure of other business.

20. The Revenue of the district amounts to Rupees 14,657-12-10, while the expenditure is but Rupees 11,959-9-5, showing a surplus of Rupees 2,698-3-5. This, however, is but accidental as, owing to the absence of the Deputy Conservator, a saving of Rupees 5,380 is made in salary. The charge of the Ayagudy and Retiambady Forests was given over to the Zemindar on the 1st July 1871. A sum of Rupees 1,039-2-7 is still due by Messrs. Campbell and Co., whose affairs are, I understand, in liquidation.

Financial Results.

21. I am inclined to think that timber might be sold to greater profit at periodical sales by auction, as I find on analyzing the accounts that the salaries of Timberyard-keepers and Watchers amount to 15 per cent. of the gross proceeds of the year's sales, and to as much as 35 per cent. on the profits.

22. This, however, should be made the subject of experiment before finally deciding to do away with depôts.

23. A sum of Rupees 1,176-14-11 remains as outstanding advance against the Ayagudy Zemin, which should be settled after the sum mentioned in paragraph 20 has been recovered from Messrs. Campbell and Co., and the remaining sum of Rupees 47-1-10 will be settled in the approaching months.

I have the honour to be,
Sir,
Your most obedient servant,

(Signed) R. WILLIAMS,
Ag. Deputy Conservator of Forests.

A.

Statement showing the Receipts and Charges of the Madura Forests for the official year 1871-72.

	Rs.	A.	P.	Rs.	A.	P.
Receipts	...	...	..			
I.—Sale of timber and sandalwood brought to Depôts by Government Agency	4,303	12	8			
II.—Sale of timber, firewood, bamboos, and charcoal removed from the forests by purchasers, including seigniorage ...	10,024	6	8			
III.—Duty on foreign timber	...	...	...			
VI.—Permit fees, and rent of jungles and privileges	...	...	...			
V.—Grazing dues	...	...	...			
VI.—Sale of fruits, babool pods, and other minor forest produce.						
VII.—Sale of confiscated drift and waif timber	196	11	8			
VIII.—Fines and Forfeitures...	2	5	6			
IX.—Miscellaneous receipts	130	8	4			
Total...	14,657	12	10			
A.—Conservancy and Working.						
* I.—Timber expenses forfelling, cutting clearing, sawing, and the transport of timber by land or water to Depôts; also charges for storing, securing, watching, piling, and arrangements for selling timber	3,680	15	0			
II.—Purchase of elephants, cattle, and dead stock, tools and plant	10	7	0			
III.—Feed and keep of elephants and cattle	...	...	...			
IV.—Rent of leased forests and seigniorage paid for timber felled in leased forests, shares of villagers and others in the revenue of forests	...	...	...			
V.—Charges connected with the collection of revenue on grass, fruits, and miscellaneous produce	8	6	0			
VI.—Plantations	761	2	7			
VII.—Forest work, viz., cutting of creepers, protection of forests or trees against fire, and other work for the Conservancy and improvement of the forests; charges for selecting, marking, and girdling of the trees to be felled	671	6	7			
VIII.—Forest survey, Topographical and Valuation survey, to ascertain the contents of forests and annual rate of timber production	...	...	...			
IX.—Experiments to test the value of timber of different kinds...	0	12	0			
X.—Communications, buildings, and minor works, fences, boundary pillars, and posts, and boundary paths	40	0	0			
Total Conservancy and Working...	5,173	1	2			
B.—Establishment.						
I.—Salaries	6,211	6	4			
II.—Travelling allowances, including batta, travelling expenses, and tentage...	205	0	0			
III.—Contingencies	370	1	11			
Total Establishment...	6,786	8	3			
Total Expenditure...	...	...	...	11,959	9	5

* Felling and carrying were contracted for together, so these items cannot be divided in account.

† Sums realized from any other source should be entered under the head of Miscellaneous Receipts.

B.

Detailed Statement showing the Timber, etc., felled Departmentally in the Madura Forests during the official year 1871-72.

Division of Range.	Description of Timber and other Forest produce.	No. of Cubic feet.	No. of Maunds.	Rate of valuation per Cubic foot.	Rate of valuation per Maund.	Total Valuation.
		C. ft. I. P.		Rs. A. P.		Rs. A. P.
Cumbum	Vengay	3,303 2 4	... ...	1 0 0	... ...	3,303 3 0
Pereacolum	Do.	14 11 1	... ...	1 2 0	... ...	16 12 7
Pulney	Do.	1,479 1 7	... ...	1 0 0	... ...	1,479 1 8
	Total...	4,797 3 0	... ...	... ...	... ...	4,799 1 3

C.

Detailed Statement showing the sales of Timber, etc., from each Depôt of the Madura Forests during the official year 1871-72.

Name of Depôt.	Description of Timber or other Forest Produce.			Total Valuation.	Total amount actually realized.	Difference between Columns 3 and 4.	Explanation of difference.
	Description of Timber.	No. of Cubic feet.	Rate of valuation per Cubic foot.				
1	2			3	4	5	6
		C. ft. I. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Pereacolum	Vengay	935 9 3	1 0 0	935 12 1	1,166 12 11	231 0 10	
	Teak	57 4 2	1 0 0	57 5 7	86 0 4	28 10 9	
	Blackwood...	53 4 9	1 0 0	53 6 4	66 11 11	13 5 7	
Cumbum	Vengay	448 1 11	1 0 0	448 2 7	504 3 1	56 0 6	
	Do.	659 0 0	1 2 0	741 6 0	741 6 0	... ...	
	Do. old	37 6 2	0 12 0	28 2 2	30 7 8	2 5 6	
	Teak	72 2 4	1 0 0	72 3 1	90 3 4	18 0 3	
	Blackwood	9 4 6	1 0 0	9 6 0	10 8 9	1 2 9	
Pulney...	Vengay	626 1 11	1 0 0	626 2 6	704 6 11	78 4 5	
Dindigul	Do.	802 8 9	1 0 0	802 11 8	902 15 9	100 4 1	
	Total...	3,701 7 9	... ...	3,774 10 0	4,303 12 8	529 2 8	

D.

Detailed Statement showing the particulars of stock of Timber in hand at the commencement and close of the official year 1871-72 *in each Depôt of the Madura Forests.*

Name of Depôt.	Description of Timber or Forest produce.	No. of Cubic feet.	No of Maunds.	Rate per Cubic foot.	Total Valuation.
	1	2	3	4	5
Stock on 31st March 1871.		C. ft. I. P.		RS. A. P.	RS. A. P.
Cumbum	Vengay, etc. ...	3,410 6 6	...	1 0 0	3,410 8 8
	Do. old... ...	144 0 0	...	0 12 0	108 0 0
Pereacolum... ...	Vengay, etc. ...	4,118 7 4	...	1 2 0	4,633 7 0
Pulney	Do.	522 0 7	...	1 0 0	522 0 9
Dindigul... ...	Do.	802 8 9	...	1 0 0	802 11 8
	Mally Vamboo ...	83 6 8	...	1 2 0	94 0 0
Madura	Vengay, etc. ...	122 5 11	...	1 2 0	137 12 10
	Total ..	9,203 11 9	...	... ...	9,708 8 11
Stock on 31st March 1872.			C. ft. I. P.		
Cumbum	Vengay, etc. ...	5,137 7 11	1 0 0	5,137 10 6½	
	Do. old	106 5 10	0 12 0	79 13 10	
Pereacolum... ...	Do.	3,474 4 5	1 2 0	3,908 10 7½	
Pulney...	Do.	1,375 0 3	1 0 0	1,375 0 4	
Dindigul	Mally Vamboo ...	83 6 8	1 2 0	94 0 0	
Mading	Vengay	122 5 11	1 2 0	137 12 10	
	Total...	10,299 7 0	... ...	... ...	10,733 0 2
				Total...	20,441 9 1
Add total valuation of timber felled during the year 1871-72 as per Column 7, Statement B.					4,799 1 3
				Grand Total...1	25,240 10 4
Deduct total valuation of timber sold as per Column 3 Statement C.					3,774 10 0
					21,466 0 4
Compare remainder with total under Column 5 ...					20,441 9 1
				Increase in Stock...	1,024 7 3

E.

Statement showing the quantity and description of Timber, etc., removed from the Forests of Madura on License and Tickets during the official year 1871-72.

Description of Timber or Forest produce.	Number of Cubic feet.	No of Maunds.	Rate of Seignorage or sale per Cubic foot or Maund.	Total Receipts under each head. RS. A. P.
Reserved and unreserved timber.	23,344 cubic feet...	...	At 2, 4, and 8 Annas per head, and 3, 4, 5, 6, and 8 Rs. per bandy-load.	1,737 10 7
Firewood	Tons 3,377, cwt. 16, and lbs. 103.	...	At ¾ and 1 Anna per head, and 1 and 1½ Rs. per bandy-load.	6,668 1 1
Charcoal	$758\frac{7}{16}$ lbs.	...	At 1 Anna per head, and 1 Rupee per bandy-load.	751 4 0
Bamboos	1,653 Cart loads ..	...	.....	1,845 14 6
			Total..	11,002 14 2
Deduct commission paid to Nattamgars at 10 per cent. on the collection made by them...				978 7 6
			Net amount credited to Government... ...	10,024 6 8

Note.—Reserved and unreserved timbers have been calculated into cubical contents at 20 cubic feet per bandy-load, and 1 cubic foot per head-load.

Firewood has been calculated into tons, etc., at 1,000 lbs. per bandy-load and 62½ per head-load.

(Signed) R. WILLIAMS,

MADURA, 15*th May* 1872. *Ag. Deputy Conservator of Forests.*

APPENDIX H.

OFFICE OF DEPUTY-CONSERVATOR OF FORESTS,
CAMP AT ELAMANORE, *8th June* 1872.

From

R. WILLIAMS, ESQ.,
Acting Deputy-Conservator of Trichinopoly and Tanjore Forests.

To

MAJOR R. H. BEDDOME,
Conservator of Forests.

SIR,—I have the honour to submit the Administration Report on the Trichinopoly and Tanjore plantations and Railway fuel-reserves for the official year 1871-72.

2. *Tours of the Officer in Charge.*—In July I visited the different Trichinopoly padugays with Mr. Morgan, the Assistant Conservator, who has been in charge of them, and gave him orders concerning fencing and the different distances at which trees were to be planted in the Experimental Plantation; I then inspected the fuel-reserves between Dindigul and Trichinopoly on different occasions. There are six different plantations and two reserves in the Trichinopoly District, of which details are given below :—

A. PLANTATIONS OF TRICHINOPOLY DISTRICT.

3. *No. I., Elamanore Plantations.*—This plantation is at about 9 miles west of Trichinopoly near the Elamanore Railway station. It consists of about 100 acres, of which 69 acres were cleared during the year. The soil is generally sandy alluvium and clay. 12,214 pits were dug at a cheap rate. 6,574 plants, viz., 4,839 Inga dulcis, 115 Tamarinds, and 1,220 Casuarinas, were planted, which are in good condition; the remaining 5,640 pits are ready for planting. 688 casualties have occurred, and were re-planted during the year. 1,151 cubic yards have been fenced with aloes. The trees planted only six months ago are grown up from 2 to 6 feet in height, and about one inch in girth near the base, with five straight stems, and look healthy. The expenditure incurred on account of this plantation amounts to Rupees 2,624-1-10, of which Rupees 2,295-5-7 has been incurred for working charges and Rupees 328-12-3 for the salary of the establishment.

4. The Assistant Conservator Mr. Morgan was directed by me to live on this plantation, with a view to a better superintendence of the operations.

5. *No. II., Kulitallay Plantation.*—This plantation is situated at half mile northward from the Railway line, of which soil is sand and clay. 10 acres have been cleared, and 6,199 pits dug Of those 1,620 pits have been planted, viz., 1,447 with Babool, 72 with Casuarina, and 101 with Neem. 563 Babool casualties have occurred, and been re-planted during the year. 1,066 cubic yards of trenching earth have been opened around the padugay. A well has been dug out and a picotta erected for the use of the nursery. These young trees planted during the month of October last are 1 to 2 feet in height and ¼ inch in girth. Expenditure incurred in this plantation during the year is Rupees 974-2-8, of which Rupees 634-13-8 has been incurred for working charges and Rupees 339-5-0 for salaries.

6. *No. III., Lallapett Plantation.*—This plantation is situated close to the Railway line, and principally lies between the river Cauvery and a channel called Elooran Voikal. One acre is cleared and 1,000 pits have been dug. In 500 of these, Babool plants have been planted, and the remaining 500 pits are ready for planting. 100 casualties have occurred and been re-placed. 325 yards of the nursery bank and picotta channel have been turfed to keep them from the floods, etc. The plants put out have grown up from 1 to 3 feet in height. Besides these there are about 5,000 trees full grown and useful for the fuel-supply. I propose to fell and sell these and to re-plant the padugay occupied by these. The expenditure incurred on account of the plantation is Rupees 514-2-4, of which Rupees 236-8-3 has been incurred for working charges and Rupees 277-10-1 for salaries.

7. *No. IV., Kulittalai Plantation, Lower Nursery (Chithalavoy).*—This plantation is situated forty yards from the Railway line and on the bank of the river Cauvery. It consists of 79 acres. Of those 2 acres have been cleared and 1,000 pits dug. 800 Inga dulcis planted. Of these 600 casualties have occurred owing to the hot weather and the soil being sandy. 200 plants are alive in the plantation. They are in good condition. The expenditure incurred on account of working expenses in the plantation is Rupees 224-7-0 and Rupees 335-1-0 on account of salaries, making a total of Rupees 559-8-0.

8. *Upper Nursery (Kulittalai).*—This plantation is at a distance of a mile to the north ward of the Railway line where 60 acres are in a block. The soil is sandy and slightly clayey 250 pits have been dug and a nursery formed. This nursery being opened too late the seedlings were not ready for planting before the end of the official year. The expenditure incurred during the year is Rupees 443-7-5, of which Rupees 189-7-9 has been incurred for working charges and Rupees 253-15-8 for salaries.

9. *B. Fuel-reserves, Thanimallay.*—This is situated close to the Railway line at Manaparai, consists of about 153 acres, and has been fully fenced with thorn-bushes at a cost of Rupees 178-15-3. There are more than 3,000 trees existing on the Hill. They measure somewhat more than 7 feet in height and 12 inches in girth.

10. *Meenakaradoo and Punjenthanghy Hills.*—These hills are at a few miles distance from the Railway line, and sixteen miles from Manaparai. Meenakaradoo has been fenced, and a pathway has been cut round the greater part of the Punjenthanghy reserve. This work will be completed shortly. The expenditure incurred on account of the fuel-reserves of Thanimallay, Meenakaradoo, and Punjenthanghy Hills during the official year is Rupees 395-6-5, of which Rupees 178-15-3 has been incurred on account of working charges and Rupees 216-7-2 for the salaries.

11. *Yield of Forests.*—About 200 bandy-loads of brush-wood have been cut in clearing the padugays lately transferred to this department and sold by public auction by the Assistant Conservator Mr. Morgan, and the amount realized thereby in the Elamanore and Kulittalai padugays, viz., Rs. 106-4-0, have been paid into the Trichinopoly and Kulittalai Taluq treasuries as per monthly accounts already submitted.

12. *Financial Results.*—The total charge of the district amounts to Rupees 8,962-12-7 as per details given below, while the revenue is but Rupees 106-5-0, showing a deficit of Rupees 8,856-7-7.

	RS.	A.	P.
The expenditure on account of the different plantations	3,870	1	6
Pay and travelling allowance of the establishment under working charges...	2,031	2	0
Mileage of the establishment under working charges	310	14	6
Communication and building	17	7	2
Miscellaneous	70	13	6
Total ...	6,300	6	8

13. *Outstanding Advance.*—A sum of Rs. 229 remains as outstanding, being the coolies, etc., unadjusted advance which will be settled in the approaching months.

14. *Tanjore District, Negapatam Plantation.*—This has been abandoned temporarily as all attempts at raising seedlings have hitherto proved a failure. The Acting Deputy-Conservator not being able at present to satisfactorily account for this is not prepared to recommend abandonment of the idea. He will examine the subject thoroughly when more pressing duties leave him leasure. The expenditure incurred on account of the plantation is Rupees 208, of which Rupees 110-8-0 has been incurred for working charges and Rupees 97-8-0 for salaries.

15. *Health.*—Health of the establishment is good.

I have the honour to be,
Sir,
Your most obedient servant,

(Signed) R. WILLIAMS,
Ag. Dy.-Conservator of Trichinopoly and Tanjore Forests.

APPENDIX I.

OFFICE OF ASST. CONSR. OF FORESTS,
CAMP AT PALAMCOTTAH, 19*th April* 1872.

From

W. C. HAYNE, ESQ.,
Assistant Conservator of Forests, Tinnevelly,

To

MAJOR R. H. BEDDOME,
Conservator of Forests.

SIR,—I have the honour to submit my Accounts and Administration Report of the Tinnevelly forests and fuel-reserves for the official year 1871-72.

SECTION I.

I assumed partial charge of the Tinnevelly ghaut-forests in January, and proceeded to make myself acquainted with the geography of my Range; after which I re-visited Madura in April to take over charge of the accounts of the Range from the Deputy-Conservator who, being about to leave on furlough, and not being relieved on the day of his departure, handed over charge of the Madura Range and Office to me, which arrangement met with your approval. I acted as Deputy-Conservator for two months.

The whole Range from north to south has been traversed twice by me, and some parts oftener. Most of the fuel-reserves have been visited. Ten months of the year have been spent on circuit and two at head-quarter.

Mr. Lowrie was appointed as Sub-Assistant Conservator and placed in charge of the Tinnevelly Railway fuel-reserves in July 1871, which appointment he resigned in March, and was relieved by Mr. Theobald on the 15th of the same month.

SECTION II.—A.

The only plantation for timber purposes in contemplation at present is one at Wartrap for Vengay; but this cannot be undertaken until the Government boundary-dispute with the Saptur Zemindar is settled.

The only other work I have in contemplation is the planting of Cardamoms, but this I cannot do until I have persuaded the Collector that no harm will accrue to the forest, and that the rainfall will not be diminished thereby.

I secretly cherish the hope that the reclamation of the Kumeri land may yet be taken in hand; if so, this and the Cardamom cultivation might be effected with the same gang of coolies.

SECTION II.—B.

At the time when Captain Walker visited Tinnevelly to select localities for opening Railway fuel-reserve plantations, Mr. Longley was the Acting Collector of the district. The Deputy-Conservator applied for permission to plant in tank-beds, of which there are a large number in Tinnevelly; but this scheme was not approved of by Mr. Longley, so there was no option left but to ascertain what Government waste land was available. Accordingly, some blocks were selected in the vicinity of Palamcottah and within 15 miles radius of the line of rail.

On Mr. Lowrie, the Sub-Assistant Conservator, being appointed to the superintendence of the Railway fuel-reserves of Tinnevelly, Mr. Puckle, the permanent Collector of the district,

having relieved Mr. Longley, directed Mr. Lowrie to visit the blocks of land selected by Captain Walker, and he reporting unfavourably of them Mr. Puckle, without hesitation, placed several tank-beds at his disposal; others have since been added as soon as arrangements were made for their strict conservancy and supplemental planting.

SECTION II.—C.

At the time of my assuming charge of the Tinnevelly Range the Deputy-Conservator, Captain Walker, complained bitterly that no plantations had been opened and that no steps were being taken to make a start.

On my arrival in the district I found the Acting Sub-Collector, Mr. Stuart, very keen on the matter of plantations, and an elaborate scheme was at once made out; finding the annual allotment for the purpose insufficient, a revised budget was drawn up in conjunction with Mr. Stuart, and submitted to the Collector, which was forwarded direct to Government; but this being an irregularity, it was naturally never sanctioned. However, two plantations on a small scale were commenced on the Pappanasam Hills in July 1871 with such funds as were available; the one on a plateau near the banks of the Surveyar, an affluent of the Tambrapurney river, where young Vengay, Blackwood, and Teak were found growing indigenous at an elevation of about 1,000 feet above the sea; the other plantation was opened some 1,500 feet higher at the foot of some long-abandoned Kumeri cultivation, with the intention, if the attempt proved successful, of eventually supplementing the whole of the forest thus recklessly cut down. Shortly after the pitting was set on foot Mr. Stuart was transferred to the Godavery District, and with him the vitality of the whole project disappeared; for the Collector withdrew some of the concessions he had made under the solicitations of Mr. Stuart who took much interest in, and paid great attention to, forest-matters.

Up to October no objection was raised by you, till I communicated to you how loath the Collector appeared to be with regard to the carrying on of the plantations, (*vide* letter No. 169, dated 13th October 1871), and applied for your advice on the matter. As you, in your reply, concurred with the Collector, I abandoned further operations, intending only to plant up the pits which had been dug with as many Vengay and such like useful seedlings as could be obtained in the neighbourhood of a proper size for transplanting. I was watching my opportunity for planting, but in the meantime, for some unaccountable reason, the Acting Sub-Collector, Mr. McWatters, was induced to issue instructions to have the seedlings planted out without my knowledge or approval.

A few weeks ago I visited the plantation and found that the Surveyar plantation was not thriving, as seedlings unsuited for the elevation had been put in, besides being a great deal too young; consequently there were many casualties.

I was, however, much pleased with the Nang (Mesua Ferrea) seedlings planted out on the Lower Oollar Plantation, considering they had received no attention since they were planted and the scanty supply of rain we had during the north-east monsoon. They had made some growth, many of them having put forth two pairs of leaves. The sum of Rupees 422-13-0 was spent on the two plantations, for which expenditure 4,200 pits were dug and about two acres of entangled jungle cleared.

As there are hundreds of acres of this abandoned Kumeri cultivation growing up into scrub-jungle of an inferior nature, it seems a great pity that a portion of it, say 50 acres, should not be supplemented as an experiment with first-class timber-trees suited to the locality.

The Collector objects, on the score that coolies will have to be employed for the purpose and consequently increase the traffic, to the reserved forests, and we shall thereby lose more from the forests than we shall gain. Your objection, however, is that similar attempts have been made elsewhere and proved unsuccessful. I have no desire to make an attempt on newly abandoned land, as the soil would doubtless be much too exhausted and only prove a failure; but such would not, I think, be the case with those portions which have lain fallow for a period of 10, 15, and 20 years.

While engaged in examining the Surveyar and Lower Oollar Plantations I also paid a visit to the block of Cinchona trees planted in the heart of the Pappanasam forests in the year 1866 by Mr Macgregor, the Sub-Collector. Something less than one-fourth acre of forest was cleared and planted with two kinds of Cinchona, the *Cinchona succirubra* and *C. Condaminea*; of the former there are 62 alive, the largest measuring 19½ feet in height and 11½ inches in girth, the smallest 14½ feet in height and 4½ inches in girth, and an average tree 17 feet in height and 7 inches in girth; of the latter there are 32 alive, the largest measuring 25 feet in height and 11 inches in girth, while there was another which measured only 21½ feet in height but 13 inches in girth, the smallest was 20 feet in height and 7 inches in girth, and an average tree 22½ feet in height and 12 inches in girth. No attention has been paid to the trees for the last two years, and the fence having fallen down the Sambar have made their way to them, and have rubbed them, and broken off some of the lower branches. There were a few seedlings under the trees, but they have been nibbled down by them.

SECTION III.

The license and voucher system was abolished at the commencement of the official year, of which I am very glad, as I feel confident that much timber was unlawfully carried away, besides sad havoc and wastage being caused to the forests. Licenses and vouchers are being issued for agricultural implements only; but this I also hope to abolish in course of the year by cutting and supplying the implements departmentally at cost-price.

SECTION IV.

Timber to the amount of 10,214-10-1 cubic feet has been brought to the various depôts at a cost of Rupees 10,928-4-3, which includes felling, carting, etc. The cost has been very heavy, but as nothing of the sort had been attempted before, and as the Overseer and myself were new to the district, the felling was given on contract for the year as an experiment. 4,323-8-0 cubic feet have been sold, of which 257-0-7 cubic feet were supplied to the Public Works Department.

As the license and voucher system was stopped at the commencement of the official year, it was contemplated that a large quantity of timber would be required in the several depôts to meet the demand; accordingly, this desideratum was taken into account when the contract was being drawn out. The demand, however, has not been so great as anticipated for two reasons, first, because our rates have been somewhat high; and in the second place, notice having been given that the voucher and license system was to cease at the commencement of the official year 1871-72. Merchants took the precaution to stock their premises; hence the small demand. That so small a quantity has been sold is not to be regretted, as it all tends towards conservancy, and the remaining timber will be all the better for seasoning.

I do not yet see my way clear to the introduction of portable sawing-machinery for timber into the Tinnevelly forests, to which allusion was made by Captain Walker in last year's report.

SECTION V.

The revenue realized this year, viz., Rupees 19,988-4-0, has fallen short of, and the expenditure, amounting to Rupees 24,576-3-6, has considerably exceeded that of last year. If, however, the value of the timber in store at our present average sale-rate and that of the forest-produce in hand were credited to revenue, there would be a surplus of Rupees 12,228-11-9 instead of a deficit of Rupees 4,585-12-8.

The expenditure has this year been increased by the opening of Railway fuel-reserves, and an increase of departmental felling.

To the opening of the Singamputty Zemindari forest to wood-cutters, firewood-gatherers, and charcoal-makers at the close of the year 1870 may be ascribed one cause of the revenue falling short of that of the past year; there being a decrease of seigniorage on fire-wood and charcoal

SECTION VI.

General Remarks.

in the Ambasamudrum Taluq to the extent of Rupees 2,600, from the forest of which taluq the Zemindari people were accustomed to draw their supply.

In the month of May 1872 the Acting Sub-Collector Mr. Stuart caused the seigniorage on fire-wood to be stopped for the space of seven days; this was equivalent to a loss of seigniorage on some 1,300 head-loads. The Collector and Mr. Stuart were at the time very keen on the matter of abolishing seigniorage on fire-wood, but when it was pointed out to the Collector the large amount of revenue that would have to be sacrificed, viz., Rupees 7,000 and odd, the idea was at once relinquished.

The privilege of free-felling began to be so much abused at one time that I was obliged to threaten its discontinuance altogether. A moderate quantity is now reported as being removed, but doubtless a large quantity besides is smuggled away. If this privilege is allowed to be conducted on too liberal a scale we shall see the base of our forest-tracts denuded in a few years.

Roads.—I have traced and pegged portions of two roads to the forests in the Ambasamudrum Taluq; one starting from Pappanasam to the Pappanasam Hills, which line was so terribly rocky that I had to give up all idea of opening it with forest funds alone; the other was from the foot of the Singamputty (Zemindari) Hills to the top of the first saddle, which was a distance of about two miles; beyond which, for a distance of some six miles, there is a plateau where there would be little or no difficulty in opening a road. The whole road could be opened for a very moderate sum, but the Collector is of opinion that the expense should not be incurred by the Forest Department but by the Public Works, and the consequence is that it has remained in *statu quo*, which is much to be regretted, as the sooner it is commenced and finished, the sooner will our high rates for felling and carriage of timber be reduced.

Discoveries.—Several valuable timber-trees have been identified in the Tinnevelly forests, and the following are new discoveries:—

Karun Kongoo, a new tree of the order Dipterocarpus, not found in flower.

Kodathani, a new tree of the order Sterculiaceæ probably a new genus allied to Sterculia about to be figured by the Conservator.

Semicarpus, a new species only found in fruit.

Forest-products.—The amount realized from forest-produce has amounted to close on Rupees 4,000, which is nearly double the amount collected last year. The amount might still be considerably augmented if the planting of Cardamom was taken in hand, but at present the Collector is somewhat unwilling that the experiment should be tried.

Health.—There have been three deaths amongst my staff of Peons. The health of the establishment has been good on the whole. My Overseer was constantly troubled with fever, which prevented his performing his work as energetically as he might. I nearly lost my Writer from cholera.

Conduct.—The general conduct of the establishment is not at all satisfactory, as is conspicuously shown by a large deficit in the collection of fire-wood seigniorage. I have had occasion to dismiss several subordinates.

Forest-offences.—Forty-seven cases of theft and mischief, comprising 214 individuals, were tried before the Sub-Magistrates of the various forest taluqs of the Tinnevelly District; of these, 46 cases were successfully proved and the individuals punished.

I have the honour to be
Sir,
Your most obedient servant,

(Signed) W. C. HAYNE,
Assistant Conservator of Forests.

(In Continuation of Annual Report for 1871-72, submitted 19th April 1872.)

Singamputty Forests.—The Singamputty Zemindari forests having been placed under the management of the Special Department, I bring it within the scope of my report.

These forests which adjoin the Pappanasam Government forests were closed to the wood-cutters and firewood-gatherers for about 2 years, but in 1870 they were again opened for traffic under the auspices of this department.

Revenue, etc.—The revenue realized during the year amounts to Rupees 8,665-11-7, and the expenditure to Rupees 1,787-13-10. A form is enclosed showing the amount of jungle-wood, fire-wood, etc., removed and the sums realized under the different headings.

Timber.—706-4-3 cubic feet of timber have been brought to depôt during the year at a cost of Rupees 785-4-11.

For a part of the year the timber was sold from a depôt at Kaladacurchy in the Ambasamudrum Taluq at fixed rates, but as the Collector expressed a desire to have periodical auction-sales at the foot of the Hills, thinking that a large profit would thus be realized, I asked and received his permission to sell by auction all the timber lying in the depôt ; 1,655-3-2 cubic feet were thus disposed of for a sum of Rupees 1,539-8-0. The experiment, however, resulted in a loss to the State, but another attempt will be made and a fair trial given before the method is given up.

2,161-4-0 cubic feet of timber were sold during the year, realizing a sum of Rs. 2,297-10-0. Of this quantity 506-0-10 cubic feet were sold at the depôt for Rupees 758-2-3 and 1,655-3-2 cubic feet by auction for Rupees 1,539-8-0.

The felling and carting was given on contract at a high rate, but the lowest that could be obtained at the time. During the ensuing year, however, measures will be taken to perform the elling d epartmentally at a reduced rate.

Forest-produce.—The revenue under the heading of forest-produce amounts to Rupees 1,389-8-0. Here, too, as well as in Government forest the collection might be increased by the cultivation of Cardamoms.

Conduct and Health.—The conduct of the establishment was pretty fair ; they suffered to a moderate extent from fever.

(Signed) W. C. HAYNE,
Assistant Conservator of Forests.

STATEMENT A.

Annual Summary of Revenue and Expenditure in the Tinnevelly Forests during the official year 1871-72.

Classification.	Amount.	Remarks.
RECEIPTS.	RS. A. P.	
I.—Sale of timbers at depôts	5,492 8 5	
Do. value of timber supplied to Department Public Works	455 6 10	
II.—Sale of timber removed by purchasers	9,992 1 5	
III.—Duty on foreign timber	.....	
IV.—Permit fees	.....	
V.—Grazing dues	.....	
VI.—Sale of fruits, etc.	3,762 3 11	
VII.—Sale of confiscated timber	285 15 5	
VIII.—Fines and forfeitures	.....	
IX.—Miscellaneous	.....	
Total Receipts...	19,988 4 0	
EXPENDITURE.		
Conservancy and Working.		
I.—Timber expenses for felling	9,946 14 7	
Do. carting to depôts	463 3 11	
Do. securing and watching	480 1 1	
Do. piling and storing	40 3 6	
II.—Purchase of stock and cattle...	981 0 9	
III.—Feed and keep of cattle	.....	
IV.—Rent of leased forests	.....	
V.—Charges in collecting revenue on grass, etc...	1,577 15 0	
VI.—Plantations	1,092 13 2	
VII.—Forest work	.....	
VIII.—Forest Survey...	.....	
IX.—Experiments on timber	123 6 4	
Amount refunded	... ...	
X.—Communications and buildings	29 2 4	
Total Conservancy and Working...	14,734 12 8	
Establishments.		
I.—Salaries	7,802 3 11	
II.—Allowances	1,319 0 6	
III.—Contingencies	720 2 5	
Total Establishments...	9,841 6 10	
Grand Total of Expenditure...	24,576 3 6	

B.

Statement showing the quantity of Timber felled in the Tinnevelly Forest during the official year 1871-72.

Division of Range.	Description of Timber and other Forest-produce.	Number of Cubic Feet.	Number of Maunds.	Rate of Valuation per Cubic Foot.	Rate of Valuation per Maund.	Total Valuation
1	2	3	4	5	6	7
Tinnevelly	Vengay, etc., etc. ...	11,261	.....	From 12 Annas to 1 Rupee per cubic foot for felling, and from 11 Annas to 1 Rupee per 25 cubic feet for carting to depot.	.....	Rs. A. P. 10,407 15 8
Total...	.....	11,261	.....	.....	.....	10,407 15 8

C.

Statement showing in detail the sale and supply of Timber of different descriptions from the Depot of the Tinnevelly Forest during the official year 1871-72.

Name of Depôt.	Description of Timber or other Forest-produce; Number of Cubic Feet or Maunds sold, and Rate of Valuation per Cubic Foot or Maund.	Total Valuation.	Total Amount actually realized.	Difference between Columns 3 and 4.	Explanation of Difference.
1	2	3	4	5	6
		RS. A. P.	RS. A. P.	RS. A. P.	
Ambasamudrum ...	870-2-10 cubic feet of Kongoo, etc., etc., at Rupees 1-8-0 per cubic foot.	1,305 5 8	1,399 6 10	+ 94 1 2*	
	70-4-2 cubic feet of Vengay, at Rupees 1-8-0 per cubic foot, supplied to Department Public Works.	105 8 4	105 8 4	.....	
Kalacad	840-4-6 cubic feet of Vengay, etc., etc., at Rupees 1-8-0 per cubic foot.	1,260 9 0	1,385 7 11	+124 14 11*	* The difference is caused by sawn timber being sold at an enhanced rate of Rs. 1-12-0 per cubic foot.
	199 cubic feet of Vengay, supplied to Department Public Works.	303 3 8	349 14 6	+ 46 10 10*	
Vasudevanullur	1,800-0-10 cubic feet of Vengay, etc., etc. ...	2,707 9 8	2,707 9 8	.....	
	Total... ...	5,682 4 4	5,947 15 3		
	Total showing aggregate increase or decrease...			+265 10 11	

D.

Statement showing the particulars of Stock in hand at the commencement and close of the official year 1871-72, *and the extent of increase or dimunition of the Tinnevelly Forest.*

Description of Timber or Forest-produce.	Number of Cubic Feet.	Number of Maunds.	Rate per Cubic Foot or Maund.	Total Valuation.
1	2	3	4	5
			RS. A. P.	RS. A. P.
Vengay, etc., etc., in hand on 31st March 1871...	3,163 5 0¼	...	1 8 0	4,745 2 1
Do., do. 1st April 1872...	10,636 4 2¼	...	1 8 0	15,954 8 5
Total ...	13,799 9 3½	...	...	20,699 10 6
Add total valuation of timber and forest-produce felled during the year as per column 7, Statement B			10,407 15 8	
Do. Increased value by transport of timber			6,483 11 0	16,891 10 8
			Grand Total	37,591 5 2
Deduct total valuation of timber, etc., sold during the year as per column 3 of Statement C....				5,682 4 4
				31,909 0 10
Compare remainder with total under column 5				20,699 10 6
Increase in Stock				11,209 6 4

E.

Statement showing the Quantity of Timber, etc., disposed of under the License system during the year 1871-72.

Description of Timber or Forest-produce.	Number of Cubic Feet.	Number of Maunds.	Rate of Seigniorage or Sale per Cubic Foot or Maund.	Total Receipt (under each Head).	Remarks.
1	2	3	4	5	6
				RS. A. P.	RS. A.P.
Jungle-wood	2,398$\frac{1}{16}$ bandy-loads or 59,951-6-9 C. ft.	...	At 1 and 2 Rs. for rough and wrought respectively, per 25 C. feet	4,201 7 3½	Total receipts. 10,886 5 5
					Commission paid to Mirassidars ... 894 4 0
Bamboos ...	334$\frac{10}{16}$ bandy-loads.	...	At 12 Annas per bandy.	282 4 7	Net amount credited to Government. 9,992 1 5
Charcoal ...	2,114 bandy-loads.	...	At 1 Rupee per bandy.	1,854 1 2	
Fire-wood...	2,330¼ tons.	...	At 1 Rupee per 1,000 lbs.	3,654 4 4½	
	.....	...	.....	9,992 1 5	

STATEMENT A.

SINGAMPUTTY ZEMINDARI FORESTS.

Annual Summary of Revenue and Expenditure during the official year 1871-72.

Classification.	Amount.	Remarks.
RECEIPTS.	RS. A. P.	
I.—Sale of timber brought to depôt	2,297 10 3	
II.—Sale of timber removed by purchasers	5,503 1 9	
VI.—Sale of fruits, etc., etc....	1,389 8 0	
VII.—Sale of confiscated timber	22 7 6	
Total Receipts...	9,212 11 6	
Deduct commission paid to Mirassidars, at 10 per cent... ...	546 15 11	
Net amount credited to the Estate	8,665 11 7	
EXPENDITURE.		
A. *Conservancy and Working.*		
I.—Timber expenses for felling	706 6 2	
Do. carting to depôt	30 9 0	
Do. piling, storing, and watching, etc...	47 13 9	
V.—Charges in collecting revenue on grass, etc.	240 9 3	
X.—Communications and buildings	39 3 8	
Total Conservancy and Working...	1,064 9 10	
B. *Establishment.*		
I.—Salaries...	723 4 0	
Total Establishment...	723 4 0	
Grand Total of Expenditure...	1,787 13 10	

STATEMENT B.

Division of Range.	Description of Timber or other Forest-produce.	Number of Cubic Feet.	Number of Maunds.	Rate of Valuation per Cubic Foot.	Rate of Valuation per Maund.	Total Valuation.
1	2	3	4	5	6	7
		C. FT. IN. P.		RS. A. P.	RS. A. P.	RS. A. P.
Singamputty Zemindari Forests.	Kongoo, etc., etc.	2,161 4 0	...	1 8 0	.....	3,242 0 0
	Cardamom ...	.....	9⅓	.....	50 0 0	460 0 0
	Total...	2,161 4 0	9⅓	.....	.....	3,702 0 0

STATEMENT C.

Name of Depôt.	Description of Timber and other Forest-produce; Number of Cubic Feet or Maunds sold and Rate of Valuation per Cubic Foot or Maund.	Total Valuation.	Total Amount actually realized.	Difference between Columns 3 and 4.	Explanation of Difference.
1	2	3	4	5	6
Singamputty Estate Forest.	Kongoo, etc., etc., 2,161-4-0 cubic feet, at Rs. 1-8-0 per cubic foot.	RS. A. P. 3,242 0 0	RS. A. P. 2,297 10 3	RS. A. P. 944 5 9	
	Cardamom, 8 Maunds at 50 Rs. per Md.	400 0 0	400 0 0	.....	
	Lease of grass and other forest-produce.	989 0 0	989 0 0	.....	
	Total...	4,631 0 0	3,686 10 3	944 5 9	

STATEMENT D.

Description of Timber or Forest-produce.	Number of Cubic Feet.	Number of Maunds.	Rate per Cubic Foot or Maund.	Total Valuation.
1	2	3	4	5
Kongoo, etc., etc., remained on 1st April 1872	1,454 11 9	...	RS. A. P. 1 8 0	RS. A. P. 2,182 7 6
Forest-produce	.....	...	.....	.....
Total...	1,454 11 9	...	.....	2,182 7 6
Add total valuation of timber and forest-produce felled during the year 1871-72.				1,519 8 6
			Total...	3,702 0 0
Deduct total valuation of timber, etc., sold during the year 1871-72				3,642 0 0
Remaining in stock 5½ Maunds of Cardamom				60 0 0

STATEMENT E.

Description of Timber or Forest-produce.	Number of Cubic Feet.	Number of Maunds.	Rate of Seigniorage or Sale per Cubic Foot or Maund.	Total Receipt under each Head.	Remarks.
1	2	3	4	5	6
Jungle-wood	19,257$\frac{13}{16}$ bandy-loads.	...	1 and 2 Rs. per bandy-load.	RS. A. P. 1,533 10 0	
Fire-wood	4,547$\frac{5}{16}$ do...	...	1 Rupee do. ...	3,619 15 9	
Bamboos	27$\frac{7}{16}$ do...	...	12 Annas do. ...	24 3 0	
Ratan	3$\frac{5}{16}$ do...	...	4 Annas do. ...	2 15 0	
Charcoal	322$\frac{8}{16}$ do...	...	1 Rupee do. ...	322 6 0	
Total... ...	...	...	...	5,503 1 9	

APPENDIX K.

No. 167.

CAMP AT COIMBATORE, *16th May* 1872.

From

C. G. DOUGLAS, Esq.,
Deputy Conservator of Forests,
Anamalay, etc., Ranges.

To

MAJOR R. H. BEDDOME,
Conservator of Forests, Ootacamund.

SIR,—I have the honour to forward my Annual Accounts and Administration Report for 1871-72.

2. The report is compiled in accordance with your Circular No. 28, dated 5th June 1871.

SECTION I.

(1.) *Inspection tours of the Officer in charge.*—In May I inspected the Walliar fuel reserve, the plantations in the neighbourhood of Palghat, and visited different portions of the forests with the view of forming an opinion whether they were suitable for reservation as fuel tracts.

(2.) Throughout the month of June I made no tours.

(3.) During the whole of July and greater part of August I was chiefly engaged upon the supervision of operations in the Anamalay forests, and, therefore, made no excursions beyond their limits.

(4.) Towards the latter end of August I left Toonacadavoo (the Anamalay forest camp), and proceeding to Palghat inspected general operations, and took this opportunity of again visiting the neighbouring forests, thinking observations made during the monsoon might be usefully compared with the notes taken at my last inspection in May.

(5.) In September I was, for the most part, busy with the Anamalay operations; I was, however, absent for a day or two, as a party concerned in the settlement of a boundary dispute between Malabar and Coimbatore districts.

(6.) In October, at the request of the Deputy Superintendent, Revenue Survey, I accompanied the Conservator of Forests to the Cochin Government round the southern and south-western boundaries of the Government and leased forests.

(7.) During the early part of November I visited the Palghat and Sholacurray works.

(8.) From the 14th to the 21st of December I accompanied you through a considerable portion of the Bolumputty forests.

(9.) In January I proceeded to Beypore on duty connected with the despatch of Bombay timber.

(10.) In February I took a tour of inspection round the Poonachy and Oodoomalpettah forests, reached Anamalay on the 5th, whence I inspected the whole of the outlying forest depôts, Government and leased, in order to make sure that proper measures had been taken to prevent fires, and was thus engaged till the 10th, when I proceeded with the office to Coimbatore. In March I accompanied you through the forests from Anamalay to Palghat, starting on the 15th and returning to Coimbatore from the latter place on the 25th.

SECTION II.—RESERVES.

3. *A.—Reserved Forests.*—Operations have been chiefly confined to the leased forest during the past year, as will be seen from the following rehearsal of work performed in that and the Government forest.

4. Fifty rosewood and thirty teak trees have been felled in the leased forest,* 3 rose and twenty teak in the Government forest. The teak being all of inferior growth was rough squared into piles.

* Trees 80×6 = Rs. 480, *i.e.*, amount of stump fee to be adjusted against the advance paid to the Numbudi.

5. 576 rosewood logs containing 8,360 cubic feet 6 inches and 9 parts and seventy-one teak logs containing 1,662 cubic feet 6 inches have been prepared, together with 123-6-4 of junglewood. The cost of felling in leased forest amounts to Rupees 1,588-14-9, in Government forest to Rupees 182-9-2, which two sums equal the amount Rupees 1,771-8-0† exhibited in statement A as expenditure in felling under the heading of "timber expenses." Details of valuation will be found in statement B.

† In both cases a fraction is struck off.

6. Only a small share of the aggregated "timber expenses" in statement A should be debited against timber felled this year; from careful calculation I estimate that, including actual felling, dragging, carting, etc., and making a due allowance for the indirect expenses of the forest, such as share of road repairs, hutting, supervision, stump fees, etc., the rosewood has been stored at top of ghaut for 8 Annas 9 Pies per cubic foot, the teak at foot of ghaut for 7 Annas 4 Pies and the junglewood for 5 Annas 3 Pies per cubic foot.

7. 1,758 logs, planks, etc., of teak, rose, and other woods have been dragged by elephants, including the whole of the timber felled this year.

8. 1,717 logs of all kinds have been carted from road-side depôts to top of ghaut. Had funds permitted, I could have removed at least 500 more.

9. The Government elephants have slipped 1,278 logs, etc., from top of ghaut to the depôt at foot.

10. 1,365 logs and planks containing 22,847 cubic feet have been conveyed by carts down the ghaut road.

11. 1,999 logs, etc., containing 40,191½ cubic feet have been carted from foot of ghaut to different places, thus 292 have been sent to Pothanore and Coïmbatore, 851 to the floating station at Mungarah, 781 to the Railway Station at Palghat, besides 71 to Anamalay.

12. 700 logs have been floated from Mungarah to our coast depôt at Ponany.

13. 784 logs have been sent by rail to the other coast depôt at Beypore from Palghat, and 24 from Pothanore; from Pothanore also 157 logs have been despatched to Madras and 13 to Erode.

14. I may say that nearly the whole of the foregoing timber was originally cut and stored in the leased forest.

15. The work performed by the Government cart establishment, valued at contractors' rates during the past year, amounts to Rupees 5,630-12-0 against the cost of maintenance amounting to Rupees 6,866-4-8, which leaves a balance of Rupees 1,235-8-8 against the establishment. This failure may be ascribed to the mis-management of Overseer Mootoosawmy Pillay, under whose immediate supervision the establishment is placed. On one occasion when the carts had proceeded to Mungarah with timber they were detained by stress of weather and impassable roads, they were absent a fortnight, the greater portion of which time the cattle were without proper food, and so far as I was able to ascertain, when the circumstance came to my knowledge, the Overseer took no steps whatever either to help them out of the difficulty, or bring their unusual absence to my notice for orders. When the cattle returned they were in a wretched condition and were long before they recovered, and had I not permitted them complete rest, the consequences would have been worse than they were. In the course of the year seven bullocks died, two have been killed by tigers, and eleven have had to be disposed of at auction for a mere trifle. I think half the deaths and much of the depreciation in value of those which had to be sold may be ascribed to the circumstances noticed above.

16. The value of the work performed by the Government elephants, deducting non-working days and Sundays, is as follows :—

	RS. A. P.	RS. A. P.
Estimate of work at Rupees 7 per diem.	.....	5,159 0 0
Deduct—		
First, feed and keep	1,617 9 0	
Second, pay of establishment ...	823 0 11*	
		2,440 9 11
Balance in favour ...		2,718 6 1

In addition to the above thirty-two days labour was obtained at a variety of minor works in which the aid of elephants is necessary. 1,502 planks and logs have been dragged from the forests to the roadsides, 1,278 logs have been slipped, making a total of 2,780 pieces. The slipping cost Rupees 708, *i. e.*, the cost of maintenance of establishment during slipping operations, or about 9 Annas a plank, the remainder, which includes feed and keep in the non-working season, may be considered as the cost of dragging, namely, Rupees 1,832-9-11, which divided amongst 1,502 planks, etc., gives an average per log of, say, Rupees 1-4-0 or Rupees 0-1-3 per cubic foot. Or the work may be thus reckoned—the elephants have performed 737 days work, dragging 2,780 logs, etc., *i. e.*, each elephant has worked about 184 days, dragging nearly four logs per diem. I regret to say that one of the calves died during the working season ; there are two left, one ofwhich has commenced his education in a small way to keep him out of mischief.

17. Hired elephants dragged 256 logs, and their hire amounts to Rupees 306, which is about Rupees 1-3-0 per log, or less than 1 Anna per cubic foot. This appears cheaper than the work performed by Government elephants; but it should be borne in mind that the whole of the keep of the latter in the non-working season is included in the estimate of their cost.

18. *Contemplated operations.*—These I think may be briefly summarized in rotation corresponding with their importance, thus, first, the clearing forest depôts of old stock and its collection in marketable localities ; second, planting and systematic conservancy ; third, formation of depôts of the better sorts of timber, other than teak and rosewood, in places easily accessible, so as to meet the occasional demands of the Public Works Department and the general public ; fourth, the improvement and extension of old roads.

19. *B.—Fuel Reserve*—No fuel reserves to be reported on.

20. *C.—Plantations*—As stated in my report for last year 5 acres were felled, these have subsequently been planted with teak. The result is not so satisfactory as it might be ; soon after the seed had germinated, a very heavy storm occurring, the nursery was demolished by a land slip. It was re-made and again the seed sprung, but only to be annihilated by the grub. The young plants had been thriving beautifully, when one day, on going to see them before putting them out for good, I found that they had been attacked by grubs of the size and very much the appearance of canary seed, which attached themselves to each root in clusters of hundreds. Out of 15,000 not more than 3,000 escaped. It was an error, however, on my part omitting to provide sufficiently for casualties. The remnant was planted out and supplemented by seed sown in those pits for which there were no plants ; and notwithstanding that, owing to the first accident, it was rather late for planting by the time the second supply of seedlings were sufficiently advanced, they established themselves, have continued to thrive, and are now healthy plants of from two to three feet high. I have just completed the extension of another 5 acres, and hope to meet with better fortune. Felling costs about 10 Rupees per acre, pits of eighteen inches 15 Rupees per 1,000, and nurseries have hitherto cost about Rupees 5 per acre, which will, however, decrease with extension of planting ground. As an experiment on a small scale I contemplate planting, first, in the usual manner seedlings reared in a nursery; second, transplanting from the jungle to the plantation

* Including pay of a Fouzdar, who only joined in October at Rupees 25 per mensem.

seedlings of spontaneous growth; third, sowing some pits with seeds at the same time as the nurseries are laid down; and fourth other pits with seed at the same time that the nursery plants are put out. These will be placed in alternate lines.

I beg to suggest another experiment—the selection of small blocks of suitable jungle tolerably free from large standing timber and not crowded with bamboos. These should be cleared of all undergrowth, pitted, and fenced in much after the fashion which obtains among the cultivating jungle people of these forests and Malabar. The chief obstacle would be, I think, the preservation of such isolated patches from fire, but even this would not be a much harder task than securing the safety of outlying forest depôts, while it has the recommendation of cheapness, the advantage of placing a greater area of ground under trial, and can be executed without damage to the natural growth of the forests, a point which, in these days, is of very great importance, and further we should have a chance of utilizing a peculiarity of the Anamalays, and, I presume, of teak forests generally, namely, the partiality evinced by teak for certain localities. The irregularity of the growth of teak here is a feature that cannot fail to strike the most ordinary observer; a person may walk on the search for trees unsuccessfully for some time, when suddenly he will come on a magnificent tract which again will abruptly cease. These tracts of course are evidence that the requisite conditions of soil exist, and whether the fact is shown by the luxuriance of present growth or the stumps of former trees, I would select such spots for experiment, for though it may be a question not yet decided, whether after growing a crop of timber the ground should be replanted with the same trees, we may, in this instance, prognosticate favourable results upon the principles which Mr. Brown, Author of "the Forester," a reliable authority, bases the opinion that "successive crops of the same tree will grow each as healthily and luxuriantly as another on the same piece of ground, provided always that the kind used are planted in the land naturally adapted to them." We cannot, in fact, do better than follow the footsteps of nature, and for this reason I advocate a system of plantations regulated entirely by natural distribution.

From the jungles at the base of the Anamalays we obtain yearly between 2,000 and 3,000 Rupees by the collection of seigniorage; this sum is carried to Imperial revenues, but I would respectfully suggest that it might not inappropriately be devoted to general conservancy purposes; the sacrifice of income is insignificant when compared with the advantages derivable hereafter from returning an equivalent to compensate for the long continued drain on forests, which without some such remedy threaten eventually to become a precarious source of revenue.

SECTION III.

21. *License and Voucher Forests.*—The forests of the lower slopes and base of the Anamalays in the taluqs of Polachy and Oodoomalpettah are devoted entirely to the use of the community.

22. The department has as yet confined itself to the levying of tax, the prevention of clandestine felling, and the preservation of the better sorts of timber.

23. The revenue has improved this year, and smuggling has received a check, results ascribable to the activity of Assistant Overseer N. Armooga Moodelly, who has shown a good deal of tact in prosecuting his cases, on no occasion failing to prove them, and obtaining sentences of fines and imprisonment under Section 379 of the Penal Code.

24. It would be well if stricter conservancy could be applied to these forests rapidly disappearing; but "the immemorial rights of the people" are impedimental. Not many years ago forests abounding with game grew to within a couple of miles of Anamalay village, but now, with the exception of a narrow belt along the base of the hills, nothing is left.

25. Statement E shows the quantity of timber, bamboos, and firewood removed and the seigniorage realized, but I have taken the liberty of slightly altering the form of this appendix from that ordered by Government, by sub-dividing the columns. The tax on timber, bamboos,

fuel, charcoal, etc., is not levied here by the cubic foot, the ton or maund, but by the bandy, head, bullock, or donkey load. Each of these quantities has therefore been reduced according to ascertained capacity or weight to the measures desired.

26. 7,033 cubic feet of timber has been removed on free licenses, 197¼ tons of fuel and 1,124 bandy loads of bamboos.

27. Last year only 1,840 cubic feet of timber was taken out of the forest on free passes, and none on paid licenses. The firewood on paid licenses again has increased from 1¼ to 344 tons, while on free passes the removals have decreased from 295 to 197¼ tons. Lastly, 1,948 cart loads of bamboos have been paid for this year, whereas only 1,250 licenses were taken out the year before, but, on the other hand, free passes for only 638 cart loads were issued last, and in this year 1,124 have been granted. I think the returns are more accurate and supervision more efficient now than formerly.

The amount realized by scigniorage collections in 1870-71 amounts to Rupees 1,482-10-0, while that in 1871-72 is Rupees 2,447-6-5.

SECTION IV.

Yield of Forest, Expenditure, etc.—Statements A, B, C, D, and E furnish ample details of yield of the forests, the exports and cost. 21,651 cubic feet have been removed and sold departmentally.

SECTION V.

28. *Financial Results.*—The subjoined table shows the net result of the year's transactions

Gross Expenditure.	Cash Receipt.	Difference between 1st & 2nd columns.	Increase or Decrease in value of Stock during year.	Net Result.
38,140	56,817	+18,677	—84	+18,593

29. I have again failed to adjust the Bombay bills for timber supplied to the Marine Department during the year. The details given in Section II. will show that this was not owing to the want of timber at the coast, neither can it be attributed to the lateness of its arrival there, for on the 3rd or 4th of November I advised the Marine by telegram of my ability to deliver 500 tons of timber by the first week in December, so that it might be received at Bombay early in January; a reply was sent declining to take so much, correspondence ensued, and it was finally arranged to ship 350 tons; selection and remeasurement of timber had to be next undertaken, but all this was done by the 8th of January when I again telegraphed; vessels did not arrive, however, until the 28th of February 1872, so that they could not return until the end of March or beginning of April. I believe that the rates asked for freight were unusually high, and that this was the cause of delay. Had the bills been adjusted, the receipts would have been 1 lakh, as we are owed upwards of 40,000 Rupees.

30. The estimate for the year's operations was 30,000 Rupees, a reference to statement A will show that expenditure has been within that sum.

31. This is the first year out of four in which a real profit has been shown, last year there was a net deficit of Rupees 9,391, and in each of the two preceding years upwards of Rupees 25,000.

32. The total of the receipts exhibited in statements C and E amounts to Rupees 56,456-2-5, which is less than the total given as receipts in statement A by Rupees 360-13-0. This difference consists of Rupees 9-12-0 paid for teak seed and of Rupees 351-1-0, the amount of a refund made by the Gun Carriage Manufactory Department on account of carriage provided by us, neither of which items are inserted in any of the statements except A.

In statement C certain items show no excess of sale proceeds over valuation rates, because their value was entered in details of stock for last year at selling rates, other items in the same statement show that *less* than the estimated value has been realized, this is owing to having slightly exceeded the true quantity of timber sold in calculating probable outturn at the close of last year, the necessary checks not having been applied until afterwards. Of the other items some are sales by auction in February, but the larger ones represent profit on timber cut and sold on indent throughout the year.

33. In statement D an item of Rupees 38,424-12-0 has been inserted as " increased value of stock removed from the forest to market depôts."

The value of stock increases of course as it approaches the market, and unless this be shown the true results of the year's outlay are not embodied in the returns. Taking an average market value per foot as a starting point, the rate is decreased in proportion to the distance and character of the route intervening between the market and forest depôts until we reach the most remote stations and the lowest rates intended merely to cover cost of felling and dragging. I have attached a copy of memorandum No. II to this report as a supplement to the other statements, and in it will be found the detailed particulars of the whole stock on hand, as regards description of timber, estimated cubical contents, the locality where stored, and the value imposed.

SECTION VI.

34. *General Remarks, including conduct of Overseers and Subordinates, etc.*—I think I may say that the hopes expressed in paragraph 10 of my last report relative to the supply of cart labour have to a great extent been realized. Rates have risen, but this was to be expected, for if the advance system is to be effectually discouraged, liberal terms must be offered in exchange. I consider that the circumstances of the last few years not only warrant but demand such a concession ; however, as this is merely an assertion, it is better that the grounds for making it be shown, especially too as it is a matter affecting expenditure. There is timber now in depôt which was stored in 1859 and 1860, and much of what was cut in 1865 still encumbers the roadsides. When a stop was put to the advance system, carting above ghaut seems to have almost entirely ceased, and so great was the difficulty experienced in obtaining carriage for his timber that we find the officer in charge in 1866-67 applying for the establishment of a number of carts and bullocks at an outlay of Rupees 4,000. By these alone was timber removed above ghaut in 1867-68, for, as the Deputy Conservator remarks in the 5th paragraph of his Administration Report, " no contractors could be persuaded to come up to the forest." In the same report, one of the great objects of the then proposed ghaut was to calm the fears of contractors which, in the opinion of the Deputy Conservator, deterred them from encountering a lengthened residence in the forest, by rendering the means of ascent and descent easier. Accordingly we find a ghaut road sanctioned upon an estimate of Rupees 5,000, for less than which sum in 1868-69 the late Captain Gosling, with characteristic zeal and energy, effected the construction of a road down which much timber has since been carried, and which, it was hoped, had removed " the terrors of a four months' residence in the malarious climate of these forests, hitherto a fatal obstacle to the employment of contractors save by large and ruinous advances." These anticipations do not appear to have been fulfilled however, for, in February 1870, Government made a special exception in favor of this range by relaxing for one year, as an experiment, their order prohibitive of advances at the request of the Deputy Conservator, who in his report expresses his belief that " the renewal of advances will remove all the difficulties hitherto experienced in procuring labour." The carrying out of this experiment fell to my lot, and I failed to bring it to a successful issue, a fact to which I gave due prominence throughout my report for 1870-71. As everything else appeared to have been tried except increased rates of hire, that expedient naturally suggested itself, and for the present seems to have solved the difficulty, and the consequence is that more timber has been carted this

season in and from the forests than for many years past. It is needless for me to recite all the evils of over-crowding the forests with felled timber. With so many obstacles between it and a market it would be almost better left standing instead of exposed to risks from fire, unavailable as a means of moderating the demand on other sources, and entailing much anxiety and exposure at the most unhealthy time of year upon the officer and his staff. I submit, then, that these considerations justify a higher rate of wage ; it is indeed a pity that the position was not accepted earlier, because if the money which has been spent on the purchase of carts and cattle and on construction and subsequent maintenance of the ghaut had been laid out in higher rates of hire, we should have been able to throw the whole, or nearly the whole, of our existing stock into the market, when the sudden and unusually heavy demands arose from Bombay and which have almost as suddenly ceased, for their needs were urgent and our position unfavorable.

35. There is no doubt that either advances or profitable wages must be held out as inducements to persuade men to engage themselves on work in the forests (I speak only of these in my own charge), and while I believe that an officer may succeed in conducting the advance system to a good purpose when he knows his range, etc., I think the ready-money payments preferable, not only as being simpler and representing faithfully the working cost of a range, but as encouraging a more competitive and independent spirit among contractors to the confusion of a lot of improvident, indolent, fraudulent men, which the advance of money seems to foster, and to which when so disposed the conditions under which work has generally to be performed in these forests afford many facilities. The secret of the low rates under advances too is apt to disclose itself every few years, when money has to be written off as bad debts.

36. The departmental collection of forest produce is a scheme that appears to be rather difficult to organize on a satisfactory footing. Inquiries elicited that the Khaders are indebted to the merchants of the neighbouring plains in a sum of about Rupees 3,415, though no documentary evidence to that effect exists. Accounts are kept by the Khaders in a very primitive style, their system is, in fact, the old plan of tally. The Collector is of opinion that the best method would be to subsidize a party of Khaders by ready-money payments, I doubt myself however whether it would be worthwhile for Government to enter upon departmental collection unless the services of the whole tribe, consisting only of 108 men and 12 moopens or headmen, could be obtained. This will, I fear, prove impracticable, so long as the Chettys remain creditors, for upon the strength of their relations with the Khaders they have great influence, and will, therefore, continue creditors as long as possible, as a means of exercising control over the people with whom they have established a very profitable trade, and I cannot help suspecting that the merchants exaggerate their claims. This is merely a conjecture however correct or otherwise at present the Khaders seem to know and care very little about their debts so long as they can get plenty of rice and a sufficiency of arrack. Supposing that we could arrange the affairs of these people and come to a definite conclusion regarding the money owed by them, the only way of interrupting their trade with the merchants would be to pay off their debts for them ; but were this done, the Collector observes, we can have no guarantee that other engagements of a like nature would not soon be entered on. It is a great pity that the Khaders cannot be utilized, for, if the resources of the Anamalays are anything like what they are supposed to be, a systematic development thereof is much to be desired. At present the men are lazy and given to drink, they are living from hand to mouth, and in general appearance do not compare favourably with the men I have observed in the Cochin jungles, where the Circar monopolizes the produce and employs and takes care of the Khaders as the only gatherers.

37. Before concluding, I beg once more to urge the necessity for the adoption of conservancy and planting operations. For upwards of nearly 30 years these forests have been worked with the sole object of exporting timber, and I suppose for about 10 years little or no supervision was given towards insuring even economical and judicious felling. With the exception of a small experimental plantation commenced in 1860, and of my own feeble efforts in that direction

during the last two years, absolutely nothing has been done towards replacing the thousands of trees which have been destroyed by the axe. Not that it would have been a saving to keep the trees standing, for they were, for the most part, ripe and ready for the axe, but since we have gone on felling without planting, we have overtasked, as it were, the constitution of the forest, and now it must have not only rest but restoratives. I submit that we ought now to confine ourselves, in the more exhausted portions of the forest, to cutting such timber only as is fully mature and on the wane. Our supply of saplings should receive unremitting care, and planting be regularly commenced; but I deprecate the clearings of large openings and expensive operations until the suggestions thrown out in the latter part of paragraph 21 of this report have had a trial. In the face of the inevitable obstacles we have to encounter, it is necessary to observe some caution at the outset and, as far as possible, conduct experiments economically.

38. My establishment has given satisfaction, and the conscientious discharge of duty which I have observed on the part of Mr. Taylor, Head Overseer, is most creditable to him. The Head Clerk and 2nd Writer have had severe work, and their industry entitles them to favourable notice.

39. With the exception of one of my own travelling peons, no deaths have occurred amongst the regular staff. Mr. Taylor has suffered a good deal from fever, more particularly during the last month or two. I have been more fortunate myself, but the mortality amongst coolies employed by us has been excessive; on one occasion the Head Overseer reported that out of a gang of fifty people who had passed a night or two in the forest, no less than eight died from the effects of fever.

40. The seed of eleven different sorts of timber trees has been collected and sent to Madras for despatch to the Mauritius.

I have the honour to be
Sir
Your most obedient servant,
(Signed) C. G. DOUGLAS,
Deputy Conservator of Forests,
Anamalay, etc., Ranges.

A.

Statement showing the Receipts and Disbursement of the Anamallay Forest for the official year 1871-72.

	Receipts.	Rs.	A.	P.	Rs.	A.	P.	
I.	Sale of timber and sandalwood brought to depot by Government Agency ...	547	4	6				
	Value of timber supplied to Department Public Works	53,461	7	6				
II.	Sale of timber, firewood, bamboos, and charcoal removed from the forests by purchasers, including seigniorage ...	2,447	6	5				
VI.	Sale of fruits, babool pods, and other minor forest produce	9	12	0				
IX.	Miscellaneous	351	1	0				
	Total Receipts ...	.....	...	...	56,816	15	5	
	Expenditure.							
	A.—*Conservancy and Working.*							
I.	Timber expenses	.....	...	..				
	2. Felling and cutting of logs... ...	1,771	8	0				
	3. Sawing	125	0	0				
	4. Carriage of logs	9,906	9	4				
	5. Floating of timber	440	12	7				
	6. Storing and piling	730	5	1				
					12,974	3	0	
II.	Purchase of elephants, cattle, and dead stock, tools and plant	255	9	0				* This is properly an item of timber expenditure.
III.	Feed and keep of elephants and cattle.	*8,830	14	7				
VI.	Plantations	244	3	0				
VII.	Forest work, viz., cutting of creepers, protection of forests or trees against fire, and other work for the conservancy and improvements of the forests; charges for selecting, marking, and girdling of the trees to be felled ..	176	7	0				
X.	Communications, buildings, and minor works, fences, boundary pillars, and posts and boundary paths	4,971	14	8				
					14,479	0	3	
	Total Conservancy and Working...	.....	...	...	* 27,453	3	3	* 3,578-4-11 Govt., Forest. 23,874-14-3 Leased Forest.
	B.—*Establishment.*							*N.B.*—Of the expenditure in Government Forest, the sum of Rs 1,432-13-5 was incurred on road repairs, out of which Rs. 1,217-15-0 was laid out on maintenance and repair of ghaut road; fractional parts of one Pie omitted in dividing cost of Government and Leased Forests.
I.	Salaries	9,102	15	4				
II.	Travelling allowances	1,140	0	0				
III.	Contingencies	443	11	2				
	Total Establishment ...	.....	...	...	10,686	10	6	
	Total Expenditure ...	.....	...	...	38,139	13	9	

B.

Statement showing the quantity of Timber felled in the Anamallay Forest during the official year 1871-72.

Division of the Range.	Description of Timber.	Number of Cubic feet.	Rate of Valuation per Cubic foot.	Total Valuation.
1	2	3	4	5
				RS. A. P.
Government Forest ...	Teak	890 3 9	1 4 0	1,112 11 10
	Rose	609 11 0	1 0 0	610 0 4
	Junglewood	134 6 4	0 8 0	67 4 3
	Vengay	66 0 0	1 0 0	66 0 0
Leased Forest	Teak	1,053 8 0	1 4 0	1,317 1 4
	Rose	7,874 7 0	1 0 0	7,874 9 4
			Total...	11,047 11 1

C.

Statement showing in detail the Sale and supply of Timber of different descriptions from the Depôt of the Anamallay Forest during the official year 1871-72.

Name of Depôt.	Description of Timber.	Total Valuation.	Total amount actually realized.	Difference between Columns 3 and 4.	Remarks.
1	2	3	4	5	6
		RS. A. P.	RS. A. P.	RS. A. P.	
Beypore.	Teak	42,292 14 4	42,590 3 11	+ 297 5 7	Items of last year's sales paid for this, for which full value was not taken in one instance and excess value taken in another when estimating probable outturn.
	Rose... ...	3,290 15 8	3,274 12 8	— 16 3 0	
Pothanore.	Teak... ...	301 0 1	297 5 6	— 3 10 7	
	Do.	753 3 0	753 3 0	... ...	
	Do.	597 8 7	1,493 13 5	+ 896 4 10	Sale of timber supplied to the Madras Gun Carriage Manufactory in 1871-72.
	Rose... ...	1,504 0 0	4,512 0 0	+3,008 0 0	
Coimbatore.	Teak, old...	93 3 4	93 3 4	... ...	Sale of timber supplied to the Central Jail, Coimbatore, in 1871-72.
	Junglewood.	83 10 1	151 13 0	+ 68 2 11	
	Do. old.	147 8 4	295 0 8	+ 147 8 4	
Pothanore.	Teak... ...	300 3 6	300 3 6	... ...	Item of last year's sales paid in this year.
Coimbatore.	Do.	62 12 0	108 4 0	+ 45 8 0	Sale of auction at Coimbatore in 1871-72.
	Rose... ...	130 0 0	138 13 0	+ 8 13 0	
Total C. ft. 21,651*...		49,556 14 11	54,008 12 0	.....	
	Total showing aggregate Increase...			4,451 13 1	

* Particulars.

Teak	18,531
Rose	2,726
Vengay	271
Junglewood ...	123
	21,651

D.

Statement showing the particulars of stock in hand at the commencement and close of the official year 1871-72, *and the extent of increase or diminution of the Anamallay Forest.*

Description of Timber.	Number of Cubic feet.	Rate per Cubic foot.	Rate per Maund.	Total Valuation.
1	2	3	4	5
Stock on 31st March 1871.				Rs. A. P.
Teak...	17,036 1 2	2 7 $8\frac{7}{1}\frac{0}{2}\frac{5}{3}\frac{8}{6}\frac{6}{5}\frac{8}{9}$	.....	42,192 14 4
Rose...	1,096 11 11	3 0 0	.....	3,290 15 8
Teak logs...	118 11 3	2 8 $5\frac{7}{1}\frac{3}{0}\frac{3}{5}$	.....	301 0 1
Teak...	46,422 3 0	1 0 0	.....	46,422 4 0
Do.	20,490 3 0	2 0 0	.....	40,980 8 0
Do. Hds. and Butts. ...	4,422 0 0	0 10 $5\frac{4}{7}\frac{7}{3}\frac{7}{7}$	.....	2,896 0 0
Rose	5,252 0 0	0 4 0	.....	1,313 0 0
Vengay	205 0 0	0 10 0	.....	128 2 0
Junglewood	111 0 0	1 0 0	.....	111 0 0
Do.	11 6 0	... ...	.....	20 4 1
Total...	95,166 0 4	.....	.....	1,37,656 0 2
Stock on 31st March 1872.				
Teak...	71,882 0 0	1,29,005 12 3	.....	
Rose...	12,108 0 0	8,429 0 0	.....	
Junglewood	133 0 0	136 12 1	.....	
				1,37,571 8 4
Total...	.....	.....	.....	2,75,227 8 6
Add total valuation of timber felled during the year as per Column 5, Statement B.			11,047 11 1	
Add increased value of stock removed from the Forests to Market Depôts			38,424 12 0	
				49,472 7 1
			Total...	3,24,699 15 7
Deduct valuation of timber sold during the year as per Column 3, Statement C.				49,556 14 11
				2,75,143 0 8
Compare remainder with total under Column 5				2,75,227 8 6
Decrease in stock				84 7 10

E.

Statement showing Timber, etc., disposed of under License and Voucher system in the Anamallay Forest during the official year 1871-72.

Description of Timber.	Quantity.				Rates on Seigniorage or Sale per				Total Receipts under each heading.
	C. ft.	Tons.	Bandy-loads.	Mds.	Cubic foot.	Ton.	Bandy-load.	Maund.	
					RS. A. P.				RS. A. P.
Timber, 1st Class..	80	.....	.....	...	0 3 0	.....	.....	.....	15 0 0
Do. 2nd do....	324¼	.....	.....	...	0 2 0	.....	.....	.....	40 8 6
Firewood	...	344 1629/3589	.....	...	.....	2 3 10⅖	.....	.....	771 9 3
Bamboos	...	.....	1,948 13/24	...	.....	.....	0 12 0	.....	1,461 6 6
Charcoal	...	.....	.....	768	.....	.....	.....	0 1 3	60 0 0
Gallnuts	...	.....	.....	380⅘	.....	.....	.....	0 2 6	59 8 0
Canes, 800 (in number) at 1 Rupee per 100	...	.....	.....	...	.....	.....	.....	.....	8 0 0
By sale of confiscated Junglewood..	...	.....	.....	...	.....	.....	.....	.....	15 0 0
Do. do. Ploughs..	...	.....	.....	...	.....	.....	.....	.....	14 15 0
Do. do. Firewood.	...	.....	.....	...	.....	.....	.....	.....	1 7 2
Total...	...	.....	.....	...	.....	.....	.....	.....	2,447 6 5

(Signed) C. G. DOUGLAS,
Deputy Conservator of Forests.

COIMBATORE, 16*th May* 1872.

APPENDIX L.

No. 195.

CAMP AT COIMBATORE, 18*th May* 1872.

From

C. G. DOUGLAS, ESQ.,
Deputy Conservator of Forests,
Palghat and Bolumpulty Ranges.

To

MAJOR R. H. BEDDOME,
Conservator of Forests,
Ootacamund.

SIR,—I have the honour to submit the following Report on the transactions of this Range during 1871-72.

SECTION I.

2. *Inspection tour of the Officer in charge.*—My report on the Anamalay forests will supply the necessary information on this head.

SECTION II.—RESERVES.

3. *A.—Reserved Forests.*—Neither the Bolumputty nor Chenat Nair forests have been worked this year, and Sholacurray forests not extensively.

4. Thirty-two logs of junglewood and 370 teak sleepers have been felled.

5. 408 logs, etc., have been dragged to foot of ghaut.

6. 379 loads of teak, rose, and vengay heads, butts, branches, etc., have been carted from Walliar to Coimbatore, and fifty-nine vengay from foot of ghaut to Walliar and Coimbatore. 370 sleepers have been carted from the forest to Walliar Railway Station.

7. A hundred sleepers have been sent to Beyporo and 264 to Pothanore.

8. Elephants were hired at 7 Rupees per diem, and the cost of their labour amounts to 105 Rupees.

9. *Contemplated operations.*—If funds permit, it is proposed to collect timber at Wallair, to fell a small quantity of teak in log, and form a depôt of such woods as are likely to be in demand for building and general purposes.

10. *B.—Fuel Reserves. Walliar.*—176,690 square yards of grass, etc., have been cleared in the Walliar reserve at the rate of 1 Rupee per 80 square yards. A fire trace of 60 yards on the railway side and of 15 yards on the other sides has been maintained and has preserved the enclosure from damage, 12,800 pits have been weeded and cleared, 9,400 failures have been replaced. A piece of land of 40 acres has been added to the reserve during the year and fenced in by a trench and embankment, but not planted. The failures are numerous, but the general appearance of the reserve is, I think, improving; the natural growth undoubtedly bears witness to the beneficial effects of its freedom from fires and cattle grazing. The plants put out in 1869-70 average 2½ feet, those put out in 1870-71 one foot, and those of 1871-72 also a foot in height. Tamarind and Poongum seem to be the most adapted to the soil.

Contemplated operations consist of the general measures necessary to the maintenance of the reserve as it now stands; no extension is at present contemplated, and all available space within the reserve is planted.

The expenditure for the year amounts to Rupees 2,912-2-0.

11. *Nochipully.*—Eleven acres of grass have been cleared and 53,000 pits weeded, etc.; 50,000 seedlings (tamarind, poongum) were put down, and on the whole the reserve is promising. The total cost for the year amounts to Rupees 662-8-0.

12. *Pulliampully.*—Planting was commenced this season, 55,000 pits were dug and planted; Mr. Lloyd is of opinion that this will be the best fuel growing land we have. I do not myself however feel competent to judge at present.

13. Both of the foregoing plantations should, if possible, be extended, fences improved, proper wells and nurseries made, and general up-keep looked to.

The cost of Pulliampully for the year amounts to Rupees 759-8-0.

14. *C.—Plantations.*—The Sholacurray forest plantation has not been extended, grazing rights and rights of way are claimed, disputes have arisen, and, on the whole, I deemed it prudent to await the introduction of forest regulations. The expenditure on this plantation amounts to Rupees 138, of which 72 Rupees represent the pay of a watchman and gardener at 6 Rupees per mensem, and Rupees 66 the outlay in clearing off brushwood, grass, weeding, etc.

SECTION III.

15. *License and Voucher Forests.*—The lower slopes of the Bolumputty forests, like those of the Anamalay range, are worked on the license and voucher plan.

16. The quantity of timber thus sold is less by 1,400½ cubic feet than last year, while the departmental sales are increased from 346 cubic feet 4 inches and 1 part to 2,662 cubic feet and 9 inches.

17. I should point out however that though the decrease in license removals may be satisfactory, it cannot be ascribed to an increased departmental supply of the material required by the general public, for the timber provided departmentally was almost entirely in satisfaction of special indents by the Railway Company and Government, nor am I in a position to prove that this department could afford to provide, from the forests of this range which are at present under the license system, a quantity of timber adequate to the wants and means of the poorer classes. On the other hand I am of opinion that, at present, license removals do not seriously affect those forests which may be of importance to the water-supply of the neighbouring plains.

18. 130 cubic feet of timber have been taken from the forests on free passes, 12¼ tons of firewood, and 57 cart-loads of bamboos.

19. In 1870-71, 3,339 cubic feet of timber was removed free of tax, 19 tons of firewood, and 62½ cart-loads of bamboos.

Last year 2,077¾ tons of firewood paid seigniorage, and 1,322 cart-loads of bamboos against a collection in 1871-72 on 968 tons and 1,206¼ cart-loads.

20. The amount realized by license last year was Rupees 3,167-7-3 against Rs. 3,379-13-0 in statement E for 1871-72.

21. Grazing rights exist throughout the Bolumputty forests, but I should think that there would be no objection to the definition of a line shutting off the license and communal tract from those on the upper slopes and above ghaut.

SECTION IV.

22. *Yield of Forests, etc.*—Statements B, C, and E clearly show the yield of the forests, and beyond the few remarks in the preceding section do not seem to require further elucidation.

SECTION V.

23. *Financial Results.*—The true result of the year is indicated by the following table :—

Gross Expenditure.	Receipts.	Increase of Stock.	Net Result.
RS. 9,751	RS. 7,638	100	— 2,013

There would be little or no difficulty in securing a surplus were it not for the unavoidable outlay on plantations and fuel reserves.

24. Had funds been available, I might have secured a considerable profit this season. The indent for 1,000 teak sleepers could not be completed for want of money. The rate agreed on with the Railway Company was Rupees 1-12-0 per cubic foot, a favourable bargain enough, and would have amounted to 10,500 Rupees each sleeper, being $12' \times 12'' \times 6''$ or 6 cubic feet.

25. In statement D an "increased value of stock" amounting to Rupees 1,131-9-9 is entered. I have explained a similar insertion in the same appendix to the Anamalay Report, and there is, I think, no occasion for further remark.

26. Having given the financial results of these forests collectively for the year, it remains for me to explain the circumstances of each separately.

——	Bolumputty.	Sholacurray.	Chenat Nair.	Fuel Reserve.
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
Receipts ...	3,379 13 0	4,258 2 0	.....	.....
Charges ...	1,206 15 3	2,712 3 6	.....	5,434 2 0

27. The charge against Bolumputty includes pay of establishments, office contingencies, etc.

28. Sholacurray has been charged with cost of the hill plantation, feed and keep of cattle and one third of the permanent establishment pay amounting to Rupees 600, the remaining Rupees 1,200 being charged to the reserves.

29. From the commencement of 1872-73, Bolumputty will be separated from the other forests and worked from an independent fund. The other range might more properly be called the "Palghat Range" comprehending the Chenat Nair and Sholacurray forests with reserves attached.

SECTION VI.

30. *General Remarks, including conduct of Overseers and Subordinates, etc.*—The temporary establishment required for the different reserves is as follows:—

Walliar.—Seven men at Rupees 6 per mensem with one maistry at 10 Rupees, total Rupees 52.

Nochipully.—Three men at Rupees 6 per mensem = 18 Rupees.

Pulliampully.—Three men at 6 Rupees = 18 Rupees.

During the hot and dry weather, additional watchmen ought to be engaged to protect the reserves from fire, their pay may be estimated at Rupees 72.

31. The pay of gardeners and watchmen thus amounts to Rupees 1,128, or say Rupees 1,150. I think that at least 800 Rupees should be available for Walliar for the present; 300 Rupees for

Nochipully and 500 for Pulliampully as working charges, in addition to the above sum for establishments.

32. According to this estimate Rupees 2,750 are required for the reserves alone, while Rupees 2,000 ought to be available for forest work altogether, though of late much expenditure has been incurred which will not again be necessary; I do not think that less than Rupees 5,000 should be provided for Palghat Range independently of the Bolumputty fund.

33. I very strongly incline to the opinion however that the most judicious mode of maintaining a supply of railway fuel would be the formation of open reserves. I doubt if, in the face of the many rights which the ryot exercises, it will be possible to set apart larger tracts as *strict* fuel reserves, but I think it is well worthwhile to consider whether felling and grazing privileges cannot be in some degree regulated, and the greater portion of the Government land on the slopes of the range between Pothanore and Palghat be placed under fuel conservancy.

34. The prospect of laying out large sums annually is alarming, when we consider how very possible it is when our reserves reach maturity that the Railway Company may have substituted other fuel.

35. By conserving general forests however we shall be in a better position, for whether as fuel or timber reserves they will repay the attention devoted to them in more ways than one.

36. The effects of deforestment upon Walliar are apparent; this which used to be a dense elephant jungle is little else than a bare plain, heavy rains are still experienced there, and, of course, on the surrounding hills; but when I visited the reserves in September last, I found the ground as dry and the smaller rivers as empty as I have in the teak forests of Anamalay in March. I believe that in a few years the benefits of a line of hill reserves would make themselves evident, the departmental operations would not be impeded in the least, and the value of the property would by this means be greatly enhanced.

37. Except by some such scheme as this I see no way of obtaining an area of fuel producing jungle proportioned to the estimated demands of the railway, save at a cost hardly warranted in this part of the Presidency, where there are such ample resources at hand and when the outlay is so much more needed in other districts to which nature has been less bountiful.

38. In the 17th paragraph of the Administration Report of this range for 1869-70, a reference is made to the unauthorized clearings made by jungle tribes on the slopes of the Bolumputty hills in the taluq of Coimbatore, and the Range Officer recommends that Government should recover them and plant them with teak and rosewood, to the growth of which, soil, climate, and rainfall are equally favorable. Nothing has as yet been done towards carrying out the suggestion, and Government when reviewing the report for last year expressed their anxiety relative to certain water sources for the protection of which these forests are considered indispensable. The denudation of these hills is, as remarked by the officer, to be condemned, but whether it would be wise to replant the clearings with valuable timber is, I think, questionable. To regain possession would be cheap and easy enough, for the land has already, I believe, been deserted, it having been cleared originally under the Kumari system, a method of cultivation which has been employed by jungle people in various districts under several designations, the local term for which in this part I do not at present remember to have heard. I doubt whether it will be an easy matter to supplant by useful timber the dense growth of secondary jungle, which is always the result of the destruction of virgin forest and the subsequent abandonment of the ground so cleared after a year or two where the above system prevails. I believe that the eradication of this secondary growth would be found more costly than opening plantations on fresh ground. Moreover, it has been remarked that though, in the course of years, trees do grow once more, the better sorts of timber are rarely observed to thrive in such spots. I conceive the primary object of Government in this instance to be the conservation of the water supply by providing a natural covering for the hill slopes, and doubtless it would be highly desirable to re-place the deforestment which has

occurred with valuable trees; I think, however, there are grounds for doubting whether the success or remuneration would be commensurate with the trouble and the outlay. It is known that in a period of from fifteen to twenty years jungle is naturally restored, often sufficiently so to attract re-cultivation on the Kumari principle, from which I conclude that the aim of Government may be fully accomplished without expense or risk.

39. Mr. Lloyd has remained in charge of the Palghat forests during the year, but has not sustained his previous character for efficiency. He does not appear to devote sufficient care and attention to his accounts, etc., and altogether has shown that he requires closer supervision than is in the power of the Anamalay Range Officer to bestow.

40. The Bolumputty Overseer has performed his duty satisfactorily except that on one occasion, when out measuring timber, he and his peons incontinently took to their heels at the approach of a herd of elephants, feeling himself, as he put it, " at the point of death."

I have the honour to be,
Sir.
Your most obedient servant,

(Signed) C. G. DOUGLAS,
Deputy-Conservator of Forests.

A.

Statement showing the Receipts and disbursements of the Bolumpully Forest for the official year 1871-72.

	Rs. A. P.	Rs. A. P.
Receipts.		
I. Sale of timber and sandalwood brought to depôts by Government agency	2,739 0 0	
Value of timber supplied to Department Public Works ...	1,519 2 0	
II. Sale of timber, firewood, bamboos, and charcoal removed from the forests by purchasers, including seigniorage.	3,379 13 0	
VI. Sale of fruits, babool pods, and other minor forest produce	.....	
Total Receipts...	.....	7,637 15 0
Expenditure.		
A.—Conservancy and Working.		
I. Timber Expenses	.....	
2. Felling and cutting of logs	606 14 0	
3. Carriage of logs	600 0 0	
4. Drag ropes	12 0 0	
	1,218 14 0	
III. Feed and keep of elephants and cattle	716 12 6	
VI. Plantations	4,472 2 0	
VII. Forest work, namely, cutting of creepers, protection of forests or trees against fires and other work for the conservancy and improvement of the forests, charges of selecting, marking and girdling of the trees to be felled	178 0 0	
X. Communications, buildings and minor works, fences, boundary pillars and posts and boundary paths ...	386 1 2	
Total of Conservancy and Working...	6,971 13 8	
B.—Establishment.		
I. Salaries	2,347 0 0	
II. Allowances	360 0 0	
III. Contingencies	72 4 6	
Total of Establishments...	2,779 4 6	
Total of Expenditure...	.....	9,751 2 2

B.

Statement showing the quantity of Timber felled in the Bolumpully Forest durig the official year 1871-72.

Division of the Range.	Description of Timber.	Number of Cubic feet.	Rate of Valuation per Cubic foot.	Total Valuation.
1	2	3	4	5
			Rs. A. P.	Rs. A. P.
Sholacurray... ...	Teak	1,584	1 0 0	1,584 0 0
	Do.	600	0 4 0	150 0 0
	Do.	30	0 4 0	7 8 0
	Junglewood	384	0 8 0	192 0 0
	Rosewood	532	.....	150 0 0
	Total...	3,130	.....	2,083 8 0

C.

Statement showing in detail the sale and supply of Timber of different descriptions from the Depôt of the Bolumputty Forest during the official year 1871-72.

Name of Depôt.	Description of Timber.	Total Valuation.	Total amount actually realized.	Difference between Columns 3 and 4.	Remarks.
1	2	3	4	5	6
		C. FT. RS. A. P.	RS. A. P.	RS. A. P.	
Coimbatore. etc.,	Teak	1,712½ 1,845 7 5	2,958 8 7	1,113 1 2	
	Vengay ...	218¼ 873 0 9	873 0 9	.....	
	Rosewood ...	300 293 12 0	323 8 8	29 12 8	
	Junglewood.	352¾ 103 0 0	103 0 0	.....	
		2,583½ 3,115 4 2	4,258 2 0	1,142 13 10	

D.

Statement showing the particulars of stock in hand at the commencement and close of the official year 1871-72, *in the Bolumputty Forest.*

Description of Timber.	Number of Cubic feet.	Rate per Cubic foot.	Rate per Maund.	Total Valuation.
1	2	3	4	5
Stock on 31st March 1871.		RS. A. P.	R. A. P.	RS. A. P.
Teak...	173 11 7	2 8 0	.....	434 14 7
Vengay	698 5 3	1 4 0	.....	873 0 9
Rose	70 4 8	3 0 0	.....	211 2 8
Teak	59 6 0	2 0 0	.....	119 0 0
Do.	1,657 0 0	0 8 0	.....	828 8 0
Do. pieces	264 6 0	0 3 0	.....	49 9 6
Rose	653 6 0	2 0 0	.....	1,307 0 0
Do.	8 0 0	.....	.....	13 13 3
Do. heads and butts ...	472 0 0	0 11 10 4/19	.....	350 0 0
Junglewood	676 9 0	1 0 0	.....	676 12 0
Do.	260 0 0	0 10 0	.....	162 8 0
Total ...	4,994 0 6	.....	.....	5,026 4 9

Stock on 31st March 1872.		RS. A. P.	
Teak	2,656½	2,019 15 4	
Rose	1,432¾	2,247 11 0	
Vengay	480½	484 0 0	
Jungle	968	374 8 0	
			5,126 2 4
			10,152 7 1
Add total valuation of timber felled during the year, as per column 5, statement B...		2,083 8 0	
Add increased value of stock removed from the forest to the market depôts		1,131 9 9	
			3,215 1 9
		Total ...	13,367 8 10
Deduct valuation of timber sold during the year as per column 3, statement C..			3,115 4 2
			10,252 4 8
Compare remainder with total under Column 5			10,152 7 1
			99 13 7

E.

Statement showing Timber, etc., removed under Voucher and License system in the Bolumputty Forest during the official year 1871-72.

Description of Timber.	Quantity.				Rates on Seigniorage or sale per				Total Receipt under each Heading.
	Cubic feet.	Tons.	Bandy loads.	Maunds.	Cubic foot.	Ton.	Bandy load.	Maund.	
							Rs. A. P.	Rs. A. P.	Rs. A. P.
Timber, first class	176	.....	.....	.....	0 3 0	.....	.....	.....	33 0 0
Do., second class	1,602½	.....	.....	.....	0 2 0	.....	.....	.....	200 5 0
Firewood	.....	968 97/896	.....	.....	.....	2 3 10 2/5	.....	.....	2,168 9 0
Bamboos	.....	.....	1,206¼	.....	.....	.....	0 12 0	.....	904 11 0
Charcoal	.....	.....	.....	790 2/5	.....	.....	.....	0 0 11¼	46 5 0
Valum Bark	.....	.....	.....	83 1/5	.....	.....	.....	0 5 0	26 0 0
By sale of confiscated firewood ...	.....	.....	.....	.....	.....	.....	.....	.....	0 15 0
Total...	.....	.....	.....	.....	.....	.....	.....	.....	3,379 13 0

Coimbatore,
18*th May* 1872.

(Signed) C. G. DOUGLAS,
Deputy-Conservator of Forests,
Anamalay and Bolumputty Ranges.

APPENDIX M.

DEPUTY CONSERVATOR'S OFFICE,
OOTACAMUND, 30*th May* 1872.

From

LIEUTENANT-COLONEL H. R. MORGAN,
Deputy Conservator of Forests, Mudumallay, etc., Forests.

To

MAJOR R. H. BEDDOME,
Conservator of Forests, Ootacamund.

SIR,—I have the honour to forward the annual Report of the Forests under my charge for the year 1871-72.

SECTION I.—*Inspection Tours.*

In April, Mudumallay teak plantations, Carting operations and general work of the forests were inspected.

In May the Mudumallay forest works were again inspected. The Suttiamungalum sandalwood plantations, the forests in that taluq, and the Collegal sandalwood plantations at Vyloor were inspected.

In June the forest operations at Mudumallay were inspected twice, once in the beginning of the month, and at the end.

In July the floating operations at Nareingapett, Bowani, and Erode were inspected, also the river as far as Trichinopoly.

In August the plantations and general work at Mudumallay, the reserves at Mettoopolliem for railway fuel, and again the planting operations at Mudumallay were inspected.

In September the planting and other works at Mudumallay were inspected.

In October the Wynaad forests were inspected, also the work at Collegal.

In November the sandalwood plantations of Collegal at Vyloor, also those of Tallamallai in Suttiamungalum, and the plantations and carting operations at Mudumallay were inspected.

In December the floating operations at Nareingapett, Bowani, and Erode were inspected.

In January the carting and other works at Mudumallay were inspected.

In February the works on the river at Nareingapett, Erode, and Bowani were inspected.

In March the forests of Wynaad.

SECTION II.

A.—RESERVED FORESTS.—OPERATIONS AND CONTEMPLATED DITTO.

Mudumallay Forest, dragging timber.—5,165 cubic feet of teak have been dragged from the forest to depôts, only one elephant has been employed at a cost of Rupees 601-7-4.

Carting Timber.—During the past year twenty-five carts have been employed in carting timber from the far depôts in the forests to the Karkana; 25,361¼ cubic feet have been carted at

an expense of Rupees 4,302-15-1 ; at contractor's rates it would amount to Rupees 4,297-7-3, leaving a balance in our favor of Rupees 5-7-10.

Roads.—The main line of road with feeders is in a good state of repair, though the bridges had to be twice rebuilt, being destroyed once by elephants and once by floods.

Contemplated operations.—30,000 cubic feet to be carted to Mysore, and 20,000 cubic feet to Ootacamund.

B.—Fuel Reserves.

Operations and contemplated operations.—In Mettoopolliem the reserves according to the map projected in conjunction with the Assistant Commissioner Mr. Galton are being demarcated, as they are extensive it will take a year or more.

Contemplated operations.—To demarcate reserves and form a small nursery for filling up gaps in the ground.

Bowani Fuel Reserves.—These are not yet demarcated ; in the event of the Railway coming to terms with us, it will be very necessary to have very large fuel reserves in the Burghoor valley, and smaller ones between Cauverypuram and Nareingapett.

C.—Plantations, Operations, etc.

This year 13,000 teak plants were put out at Benni, the failures at the end of the year amounted to 7 per cent. ; the season was favourable for planting, the total number of plants is 43,000. 12 acres have been cleared for this year's planting, and new nurseries formed. The cost of plantations, up to the end of the official year, amounts to Rupees 2,931-6-9 ; total up to last year Rupees 9,302-7-3 ; total of the whole Rupees 12,233-14-0.

Trees planted in 1863 now nine years' old, first-class height 27 feet, circumference 6 feet from the ground, 20 inches second class, 19 feet high, 12 inches round.

Contemplated operations.—To plant 12 acres with teak and fell 12 acres of forest for next year.

Seegoor and Suttiamungalum.—During the past year 7,000 sandalwood trees have been planted, this raises the total to 41,000 ; 8 acres have been cleared, ploughed, and pitted ; the trees are progressing satisfactorily. The cost up to the end of last year was Rupees 5,495-8-3 ; in this year Rupees 1,511-2-3 ; total Rupees 7,006-10-6.

Contemplated operations.—To plant 10 acres.

Seegoor Plantation.—A new plantation has been commenced at a very favourable site in the Seegoor forests ; the land is good, and water is procurable from the hills ; large nurseries have been made, and pitting has been commenced ; seed is germinating in the beds ; cost to date Rupees 339-0-8.

Contemplated operations.—To plant 10 acres.

Ballyrungum Sandalwood Plantations at Vyloor.—During the past year 10 acres have been planted ; this brings the total planted to 14 acres ; in addition to this 40 acres have been cleared and are ready for ploughing and planting with the first rains ; a water channel has been projected ; the cost up to last year was Rupees 948-13-2 ; in this year Rupees 2,890-4-7 ; total Rupees 3,839-1-9.

Contemplated operations.—To plant 50 acres.

The elephants have been found very useful for ploughing, but at first there was a considerable amount of breakage due to roots concealed in the ground, these surmounted weeding will be easy ; the first cost of removing stumps and roots is heavy, about 25 Rupees an acre, but this will in two years be more than covered by the difference in the cost of weeding due to the employment of bullocks instead of coolies.

SECTION III.

LICENSE AND VOUCHER FORESTS.—OPERATIONS AND CONTEMPLATED OPERATIONS.

Seegoor and Suttiamungalum.—During the year 4,068 cubic feet of timber were removed on license, and 100 tons of firewood, amount realized Rupees 1,154-10-0.

Departmental working.—3,584 maunds of sandalwood were felled and brought to depôts, valued at Rupees 11,200.

Contemplated operations.—To fell 3,000 maunds of sandalwood and 5,000 cubic feet of acha and blackwood.

Bowani.—Operations for rendering the Nareingapett cut passable have been carried on vigorously.

License Removal.—10,670 cubic feet of timber, amount realized Rupees 2,667-8-0.

Departmental felling.—4,033$\frac{5}{7}$ maunds of sandalwood felled and brought to depôts, valued at Rupees 12,603-8-0, 1,953$\frac{1}{2}$ tons of firewood for railway fuel valued at Rupees 5,890-8-0, and bamboos 159$\frac{5}{7}$ cart loads valued at Rupees 159-11-5.

Contemplated operations.—To fell 2,500 maunds of sandalwood, to prepare 10,000 tons of railway fuel; to render dangerous places in the Cauvery river feasible for rafts.

Collegal License Removals.—Timber 2,176 cubic feet, amount realized 544 Rupees.

Departmental felling.—4,641$\frac{1}{7}$ maunds of sandalwood felled and brought to depôt valued at Rupees 14,504.

Contemplated operations.—To fell 3,000 maunds of sandalwood and store 5,000 cubic feet, vengay, teak, etc., in depôt.

SECTION IV.

Yield of Forest Expenditure on Felling and Carting, etc.—Vide Table A.

Financial Results.—These are not exactly satisfactory, as the expenditure of all the forests in my charge amounts to Rupees 85,451, and the receipts to Rupees 77,991, showing a deficit of Rupees 7,460.

The falling off may be explained as follows :—

First, instead of 50,000 Rupees worth of timber, the Public Works took but 12,000. In July we failed to sell our timber in Mysore valued at more than 30,000 Rupees, in consequence of the 3 Rupees tax on our timber not having then been repealed. I did not then attach much importance to the failure of the auction, as I considered that good prices would be realized on the commencement of the railway; unfortunately, for State reasons, it was considered advisable to postpone the commencement of the railway, there was nothing left for us but to hold an auction at once, as 40,000 cubic feet of Poolpilly Temple timber were coming in and would certainly undersell us. There were some 2,000 logs of Mudumallay and Wynaad timber containing 60,000 cubic feet. This was a large amount to be thrown on the market at once, but there was no help for it.

The results of the sale could not appear in this year's account, or a surplus of about 13,000 Rupees instead of a deficit would have appeared. Government in their Order No. 609 of 16th April, remark that "the expenditure might be lightened and an even balance maintained between demand and supply," unfortunately hitherto we have not been able to control the demand; at one time the Public Works took 40,000 cubic feet a year, at another time but 12,000, they demand seasoned timber, and any supply that they may demand must be met. It is better that the forests should lose a few rupees than that Public Works should be delayed or have to use unseasoned timber. Could we reckon upon a fair price in Mysore for our timber at auctions, we might sell our surplus stock annually; but the Poolpilly Temple forest people are always ready to undersell us. For instance, if we sell all round for a rupee the cubic foot, the Poolpilly people sell for 14 Annas. Again, native merchants have a curious fancy for freshly felled timber, and always prefer it to well seasoned timber. However, I do not anticipate any great falling off in receipts at present, the stoppage of the railway has been a great blow both to Mudumallay and the

Wynaad forests, as, irrespective of the demand for timber for construction of the line, we could have carried our timber to Bangalore for 2 Annas a cubic foot instead of 5 Annas the present rate.

Seegoor and Suttiamungalum.—The financial results of this forest are satisfactory, but the sandalwood is being gradually worked out, planting will in course of time more than supply the place of natural sandal. Agreeably to G. O. it is laid down that Denkinacottah sandalwood fetched more than 4 Rupees a maund; but on looking at the report, I find in page 62 that 1,259 maunds fetched but 4,222 Rupees, or 3-5-8 per maund against ours at Rupees 3-12-0, though our best sandalwood has been long ago cut, the present stock in hand has been valued at 3-2-0, instead of 3 Rupees as formerly.

The maund of 25 lbs.

Collegal.—The surplus exhibited is satisfactory, but there is at present little demand for departmentally felled timber. In all the three taluqs of Suttiamungalum, Collegal, and Bowani, small timber yards are being formed, but our difficulty is to supply remote parts of the taluqs from a central depôt, carriage adds so much to the cost of the timber. The sandalwood plantations in these taluqs will, I trust, in course of time yield a large revenue to Government. The growth of the plant is good, the formation of heartwood in trees felled in the vicinity is satisfactory; a tree felled close by yielded upwards of 3 maunds of sandalwood worth 3-8-0 per maund in the market, the tree was about twenty-five years old, judging by the rings.

Bowani.—The results here would have been more satisfactory could we have disposed of our railway fuel, but the cut being impassable for rafts, after 600 tons had been sent through, it was considered advisable to restrict our work to getting down as much wood from Cauverypuram as the state of the river would allow also, and to work the establishments in the improvement of the Nareingapett cut and the collection of firewood against the early freshes of this year. The cut is now in a forward state, boats are also ready, and I trust there will be no delay this year. I may remark that the Executive Engineer Mr. Nordmann has sent me a plan of an improved cut which will add much to safe rafting, but unless the Railway will take our firewood it would not be worthwhile expending some 26,000 Rupees on this project. Two cart roads have also been projected at a cost of 25,000 Rupees. I need hardly remark that these roads will be but of little service to us; should the Railway require our fuel a fair revenue may be expected.

SECTION VI.

General Remarks. Health of Establishment.—The health of the establishment has been very bad, one Overseer in Wynaad died, the man who relieved him had to take sick leave, overstayed his leave, and a third Overseer was appointed, three Overseers in one year. In Mudumallay the Overseer died, and the general health of the establishment was indifferent. In Bowani the floating Overseer was obliged to resign through repeated attacks of fever, and Overseer Mr. Grant was latterly obliged to take sick leave. All the peons suffered from fever. In Collegal there has been much sickness. In Seegoor and Suttiamungalum the usual fever has prevailed.

General Remarks. Conduct of Overseers and Subordinates, etc.—Overseer Mr. Grant in charge of Bowani has done well. Overseer Appavoo Moodelly in charge of Collegal has worked in a satisfactory manner. Overseer Cundasawmy Pillay in charge of Seegoor and Suttiamungalum has given satisfaction. Overseer Vencatapah has been in charge of Mudumallay, and has been zealous in the discharge of his duties. Overseer Mr. Littlewood (floating Overseer) has worked hard.

Wood Fuel versus Coal.—Why the Madras Railway insists upon assuming that the calorific powers of coal are 3½ times greater than wood, I cannot divine. All chemists and scientific men are agreed that the highest rate of coal is but 2½ to that of wood, and many put it as low or even lower than two to one—I may mention, Sam Johnson on Peat and J. H. Lecoit on Peat, as my authorities. The former takes average steam coal at 2½ to the power of wood, the latter 60 to 36, or less than two to one. With coal at 25 Rupees a ton the Madras Railway can

well afford to pay 6 Rupees a ton for firewood delivered at a central spot like Erode. The Great Southern India Railway can also afford to pay 6 Rupees certainly as far as Trichinopoly. The Cauvery scheme of floating fuel provides some 10,000 tons annually to be used over 200 miles or more of railway; this supply can be kept up for certainty until the Padugay plantations have grown up, which may be 20 years or more hence. It is very desirable that the question of the calorific powers of wood *versus* coal should be settled by some independent authority, if wood is but 3½ to 1 of coal, then at 6 Rupees a ton 6 × 3½ = 21 Rupees against coal at 25 Rupees, but with wood at 2¼ to 1 of coal it will be 6 × 2¼ = 13-8-0 against 25 Rupees, or wood would cost little more than half of coal. Assuming the Railway consumption to be 10,000 tons at Erode, this would represent a saving roughly of tons 4,000 × 13½ Rupees = 54,000 Rupees, that is taking wood at 2½ to 1 of coal Government would receive a revenue of 25,000 Rupees annually, the seignorage on the wood, after paying all expenses of conservation, felling, floating, etc, etc. Thus both Government and the Railway would be benefited. This question will never be fairly adjusted until the Railway no longer receives wood cut at Palghaut in the most reckless fashion and delivered at something like 4 Rupees a ton and the Railway are allowed to assume that it takes 3½ of wood to equal 1 of coal.

Seasoning Timber.—Reports have been furnished on the seasoning of timber, I would mention that Eucalypti saplings seasoned in lime water for three months appeared, when dry, very dense, some have had their ends buried in the ground; at the end of two years should no decay have taken place the success of the process may be considered as established. One part of lime to 600 of water is sufficient, provided there is no accession of other water, should there be, it will be necessary to add to the dose of lime occasionally

Conservancy.—Under the present system of change of officers conservancy proper is next to an impossibility. In Wynaad the following officers have had change in the last ten years:—

Captains Hunter and Gib, Lieutenant Fullerton, Overseer Turnbull, Mr. Cherry, Overseer Iyasawmy, Mr. Winter, Overseer Vencatapah, and now Mr. Peet; one result was that after ordering Mr. Cherry to keep his beams full length, as I found that under Overseer Turnbull the pernicious practice of cutting a long beam in two had been customary, that Mr. Winter reverted to this plan, thereby reducing the value of the timber. Another is that in these dense and extensive forests it takes some time to ascertain the exact boundaries; no sooner is the officer master of them than he is removed, the result is that the boundaries in Wynaad between the different forests are unsettled to this day.

Criminal Prosecutions.—There have been a few cases convicted when a Deputy Collector has investigated the matter; Tahsildars generally dismiss cases. The Overseer of Bowani in a case had the greatest difficulty in persuading the Tahsildar to commit the parties, and it was only on appeal to the Deputy Collector that the parties were punished.

The new forms agreeably to G. O. No. 609, dated 16th April 1872 are appended to this report.

I have the honour to be,
Sir,
Your most obedient servant,

(Signed) H. R. MORGAN, Lieut.-Colonel,
Deputy Conservator of Forests.

A.

Statement showing the receipts and disbursement of the Seegur and Suttiamungalum Forests for the official year 1871-72.

Classification.	Amount.	Total.	Remarks.
Receipts.	RS. A. P.	RS. A. P.	
I. Sale of timber at depôts	19,161 5 6		
II. Do. do. removed by purchasers	1,154 10 0		
III. Duty on foreign timber	.....		
IV. Permit fees and rent of jungles for firewood and bamboos	1,329 12 0		
V. Grazing dues	.....		
VI. Sale of fruits, etc.	.....		
VII. Do. confiscated timber	30 11 0		
VIII. Fines and forfeitures	.....		
IX. Miscellaneous	150 14 0		
Total Receipts...	.....	21,827 4 6	
Conservancy and Working.			
I. Timber expenses—felling, etc., sandalwood ...	2,870 2 7		
Carriage of do. ...	2,216 7 6		
II. Purchase of stock and cattle	124 0 0		
III. Feed and keep of cattle	65 15 7		
IV. Rent of leased forest	.....		
V. Charges in collecting revenue and charges, etc.	.....		
VI. Plantation (sandal)	1,511 2 3		
VII. Forest work	.....		
VIII. Forest Survey	....		
IX. Experiments on timber	....		
X. Communications and Buildings	299 8 0		
Total Conservancy and Working...	7,087 3 11		
Establishments.			
I. Salaries 1,607 0 0			
II. Allowances 214 7 9			
1,821 7 9			
III. Contingencies 10 6 6			
	1,831 14 3		
Grand Total of Expenditure...	.....	8,919 2 2	

B.

Statement showing the quantity of Timber felled in the Seegoor and Satiamungalum Forests during the official year 1871-72.

Division of Range.	Description of Timber and other Forest produce.	No. of C. feet.	No. of Mds.	No. of Tons.	No. of Carts.	Rate of Valuation.	Total Valuation.
1	2	3	4	4 A.	4 B.	5.	6
						RS. A. P.	RS. A. P.
Tullamullay ...	Sandalwood.	...	*3,584	...	...	3 2 0 per md.	11,200 0 0
						Total...	11,200 0 0

* 25 lbs. a Maund.

C.

Statement showing the sale of Sandalwood, etc., in the Seegoor and Satiamungalum Forest during the official year 1871-72.

Name of Depôt.	Description of Timber or other Forest produce; number of maunds, etc., sold, and rate of valuation, etc.			Total Valuation.	Total amount actually realized.	Difference between Columns 3 and 4.	Explanation of the difference.
1	2			3	4	5	6
			Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Tullamullay ...	Sandalwood.	*4,938$\frac{11}{16}$	3 2 0 per md.	15,416 13 8	18,751 12 0	3,334 14 10	.....
Seegoor	Teak ...	819$\frac{1}{2}$	0 10 0 per C. foot.	511 15 8	409 9 0	—102 6 8	.....
			Total ...	15,928 12 11	19,161 5 6	3,232 8 7	.....

* 25 lbs. a Maund.

D.

Statement showing the Particulars of Stock in Hand at the commencement and close of the official year 1871-72, *and the Extent of Increase or Diminution of the Seegoor and Satiamungalum Forest.*

Description of Timber or other Forest Produce.	Number of Cubic feet, etc.				Rate per C. ft., etc.	Total Valuation.	
1	2			3	4	5	6
Stock on 31st March 1871.	C. FT.	TONS.	CARTS.	MDS.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Sandalwood	.....	.....	.....	2,681$\frac{7}{8}$*	3 2 0 per maund ...	8,379 0 0	
Teakwood	4,816$\frac{9}{16}$	.....	.....	.....	0 10 0 per C foot ...	3,009 8 3	
Blackwood.....	596$\frac{3}{4}$	.....	.....	.....	0 12 0 do.	447 4 6	
Vengaywood.....	1,534$\frac{7}{8}$	.....	.....	.....	0 6 0 do.	575 9 3	
Achawood	533$\frac{1}{3}$	.....	.....	.....	0 6 0 do.	200 0 0	
Benteak	2,524$\frac{3}{4}$	.....	.....	.....	0 7 0 do.	1,104 8 8	
							13,715 14 8
Stock on 31st March 1872.							
Sandalwood	.....	.....	.....	1,331$\frac{13}{16}$*	3 2 0 per maund ...	4,162 2 4	
Teakwood	3,696$\frac{1}{16}$	.....	.....	.....	0 10 0 per C. foot ...	2,310 1 0	
Blackwood.....	396$\frac{3}{4}$	.....	.....	.....	0 12 0 do.	297 4 6	
Vengay	1,334$\frac{7}{8}$	.....	.....	.....	0 6 0 do.	500 9 3	
Benteak	2,324$\frac{3}{4}$	.....	.....	.....	0 7 0 do.	1,017 0 8	
Achawood	533$\frac{1}{3}$	.....	.....	.....	0 6 0 do.	200 0 0	
							8,487 1 9
					Total...	.....	22,203 0 5
Add total valuation of timber, etc., felled during the year as per column 6, Statement B						.....	11,200 0 0
					Grand Total...	.....	33,403 0 5
Deduct total valuation of do., etc., sold during do. as per do. 3, Statement C.....						15,928 12 11	
Do. do. of do. destroyed by fire, white-ants, etc.....						500 0 0	
							16,428 12 11
							16,974 3 6
					Compare remainder with total under Column 5...	.....	22,203 0 5
					Decrease in Stock...	.....	5,228 12 11

* 25 lbs. a Maund.

E.

Statement showing Timber, etc., disposed of under the License and Voucher system in the Seegoor and Satiamungalum Forest during the official year 1871-72.

Description of Timber or other Forest produce.	Number of Cubic feet.	Number of Maunds.	Number of Cart loads.	Rate of Seignorage.		Total Receipts.
				Per Cart load.	Per Cubic foot or Maund.	
1	2	3	3 A	4		5
				Rs. A. P.	Rs. A. P.	Rs. A. P.
Teakwood	280	...	21	5 0 0	0 6 0	105 0 0
Vengaywood	168	...	14	3 0 0	0 4 0	42 0 0
Blackwood	40	...	3	5 0 0	0 6 0	15 0 0
Junglewood	3,580	...	298½	3 0 0	0 4 0	895 0 0
Fuel	4,068 100	Tons.	....	...	...	97 10 0
					Total...	1,154 10 0

F.

Statement showing Timber felled, etc., in the Seegoor and Satiamungalum Forest during the official year 1871-72.

Year.	Departmentally.	On License and Voucher.	Total.	Free.
1870-71	.....	10,580	10,580	...
1871-72	.....	4,068	4,068	...

G.

Statement showing the Financial transaction of the Seegoor and Satiamungalum Forest for the official year 1871-72.

Year.	Gross Expenditure.	Cash Receipts.	Difference between columns 2 and 3.	Value of Timber in Depôt.	Increase of value during the year.	Decrease of value during the year.	True result of the year calculated on Columns 4, 6 and 7.
1	2	3	4	5	6	7	8
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1871-72 ...	8,919	21,827	12,908	8,487	...	—5,229	+7,679

Ootacamund,
1st *June* 1872.

(Signed) H. R. MORGAN, Lieut.-Colonel,
Deputy Conservator of Forests.

A.

Statement showing the receipts and disbursement of the Collegal Forest for the officia year 1871-72.

Classified Items.			Amount.			Total.			Remarks.
			Rs.	A.	P.	Rs.	A.	P.	
Receipts.									
I. Sale of timber at Depôts			16,500	0	0				
Do. of value of timber supplied to D. P. W.			.....						
II. Sale of timber removed by purchasers ...			544	0	0				
III. Duty on foreign timber			.....						
IV. Permit fees and rent of jungles for firewood bamboos, etc.			975	0	0				
V. Grazing dues			.....						
VI. Sale of fruits, etc.			.....						
VII. Sale of confiscated timber			.....						
VIII. Fines and forfeitures			.....						
IX. Miscellaneous			.....						
Total Receipts...			.....			18,019	0	0	
Conservancy and Working.									
I. Timber expenses—felling, etc.			1,744	11	0				
Carriage of do.			2,524	3	0				
II. Purchase of stock and cattle...			888	5	6				
III. Feed and keep of do.			785	10	10				
IV. Rent of leased forests			.....						
V. Charges in collecting revenue on grass, etc.			.....						
VI. Plantations			2,890	4	7				
VII. Forest work			.....						
VIII. Forest Survey...			.....						
IX. Experiments on timber			.....						
X. Communication and Buildings			110	9	2				
Total Conservancy and Working...			8,943	12	1				
Establishments.									
I. Salaries	1,904	0	0						
II. Allowances	384	0	0						
	2,288	0	0						
III. Contingencies	42	6	0						
			2,330	6	0				
Grand Total of Expenditure ..			...			11,274	2	1	

B.

Statement showing the quantity of Timber, etc., felled in the Collegal Forest during the official year 1871-72.

Division of Range.	Description of Timber and other Forest produce.	No. of Mds.	No. of C. ft.	No. of Tons	No. of Carts.	Rate of Valuation.	Total Valuation.
1	2	3	4	4 A.	4 B.	5	6
						Rs. A. P.	Rs. A. P.
Collegal ...	Sandalwood ...	*4,641 1/5	...	...	...	3 2 0 per md.	14,504 0 0
						Total...	14,504 0 0

* 25 lbs. a Maund.

C.

Statement showing the sale of Sandalwood in the Collegal Forest during the official year 1871-72.

Name of Depôt.	Description of Timber or other Forest produce; number of cubic feet or maunds sold, and rate of valuation.			Total Valuation.	Total amount actually realized.	Difference between Columns 3 and 4.	Explanation of the difference.
1	2			3	4	5	6
Collegal ...	Sandalwood ...	5,057½½*	RS.A.P. 3 2 0 per md.	RS. 15,805	RS. 16,500	RS. 695	
				15,805	16,500		
					Total aggregate Increase...	695	

* 25 lbs. a Maund.

D.

Statement showing the Particulars of Stock in Hand at the commencement and close of the official year 1871-72, *and the Extent of Increase or Diminution of the Collegal Forest.*

Description of Timber or other Forest Produce.	Number of Cubic feet, etc.				Rate of Valuation per Cubic foot, etc.	Total Valuation.	
1	2			3	4	5	6
Stock on 31st March 1871.	C. FT.	TONS.	CARTS.	MDS.-	RS. A. P.	RS. A. P.	RS. A. P.
Sandalwood	.....	.....	.....	2,912¼½*	3 2 0 per maund ...	9,102 8 0	
Teakwood	86	.....	.....	.....	0 10 0 per C. foot ...	53 12 0	
Blackwood.....	49⅜	.....	.....	.....	0 12 0 do.	37 4 0	
Junglewood	117⅞	.....	.....	.....	0 8 0 do.	58 15 0	
							9,252 7 0
Stock on 31st March 1872.							
Sandalwood	.....	.....	.....	2,496½½	3 2 0 per maund ...	7,801 8 0	
Teakwood	86	.....	.....	.....	0 10 0 per C. foot ...	53 12 0	
Blackwood.....	49⅜	.....	.....	.....	0 12 0 do.	37 4 0	
Junglewood	117⅞	.....	.....	.....	0 8 0 do.	58 15 0	
							7,951 7 0
							17,203 14 0
Add total valuation of timber, etc., felled during the year as per column 6, Statement B.						.....	14,504 0 0
					Grand Total...	.....	31,707 14 0
Deduct total valuation of do., etc. sold during do. as per do. 3, Statement C.						.....	15,805 0 0
							15,902 14 0
					Compare Remainder with total under Column 5...	.....	17,203 14 0
					Decrease in Stock...	.....	1,301 0 0

* 25 lbs. a Maund.

E.

Statement showing Timber, etc., disposed of under the License and Voucher system in the Collegal Forest during the official year 1871-72.

Description of Timber or other Forest produce.	No. of Cubic feet.	No. of Maunds.	No. of Carts.	Rate of Seignorage.		Total Receipts.
				Per Cubic foot, etc.	Per Cart.	
1	2	3	3A	4		5
				Rs. A. P.	Rs. A. P.	Rs. A. P.
Teakwood	472	...	29½	0 4 0	4 0 0	118 0 0
Vengay	420	...	35	0 4 0	3 0 0	105 0 0
Junglewood	1,284	...	107	0 4 0	3 0 0	321 0 0
	2,176	...	171½	.....	.....	544 0 0

F.

Statement showing the Timber felled departmentally and on License in the Collegal Forest during the official year 1871-72.

Year.	Departmentally.	On License.	Total.	Free.
1871-72	.....	2,176	2,176	

G.

Statement showing the Financial transaction of the Collegal Forest for the official year 1871-72.

Year.	Gross Expenditure.	Cash Receipts.	Difference between Columns 2 and 3.	Value of Timber in Depôts.	Increase of value during the year.	Decrease of value during the year.	True result of the year calculated on Columns 4, 6 and 7.
1	2	3	4	5	6	7	8
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1871-72 ...	11,274	18,019	6,745	7,951	...	—1,301	5,444

(Signed) H. R. MORGAN, Lieut.-Colonel,
Deputy Conservator of Forests.

A.

Statement showing the Receipts and Disbursement of the Bhowani Forest for the official year 1871-72.

Classified Items.			Amount.			Total.			Remarks.
Receipts.			RS.	A.	P.	RS.	A.	P.	
I. Sale of timber at Depôts			12,779	8	0				
Do. of value of timber supplied to Department Public Works			.....						
II. Sale of timber removed by purchasers... ...			2,667	8	0				
III. Duty on foreign timber...			.....						
IV. Permit fees and rent of jungles			945	0	0				
V. Grazing dues			.....						
VI. Sale of fruits			.....						
VII. Sale of confiscated timber			10	8	0				
VIII. Fines and forfeitures			.....						
IX. Miscellaneous			.....						
Total Receipts...			.....			16,402	8	0	
Conservancy and Working.									
I. Timber expenses—felling, etc.			9,276	2	7				
Carriage of timber, etc., ...			2,611	9	8				
II. Purchase of stock and cattle			317	8	0				
III. Feed and keep of cattle			266	11	1				
IV. Rent of leased forests			.....						
V. Charges in collecting revenue on grass, etc. ...			.....						
VI. Plantations			189	10	10				
VII. Forest work			.....						
VIII. Forest Survey			.....						
IX. Experiments on timber			.....						
X. Communications and Buildings			545	0	6				
Blasting operations			4,566	9	2				
Total Conservancy and Working...			17,773	3	10				
Establishments.									
I. Salaries	1,944	0 0							
II. Allowances	794	11 4							
	2,738	11 4							
III. Contingencies	79	0 0							
			2,817	11	4				
Grand Total of Expenditure...			.....			20,590	15	2	

B.

Statement showing the quantity of Timber felled in the Bhowani Forest during the official year 1871-72.

Division of Range.	Description of Timber or other Forest produce.	No. of Cubic feet.	No. of Mds.	No. of Tons.	No. of Carts.	Rate of Valuation. Per Cubic foot.	Rate of Valuation. Per Md.	Total Valuation.
1	2	3	4	4 A.	4 B.	5	6	7
						Rs. A. P.	Rs. A. P.	Rs. A. P.
Bhowani ...	Sandalwood.	...	*4,033 2/5	...	...	... ...	3 2 0	12,603 8 0
Neringepett and Erode.	Fuel ...	...	...	1,963½	...	3 0 0	Per ton.	5,890 8 0
Do. ...	Bamboos ...	...	...	...	159 4/7	1 0 0	Per cart.	159 11 5
							Total...	18,653 11 5

* 25 lbs. a Maund.

C.

Statement showing the sale of Sandalwood, etc., in the Bhowani Forest during the official year 1871-72.

Name of Depôt.	Description of Timber or other Forest produce.			Total Valuation.	Total amount actually realized.	Difference between Columns 3 and 4.	Explanation of the difference.
1	2			3	4	5	6
			Rs A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Bhowani ...	Sandalwood ...	*3,444	3 2 0 per md....	10,762 8 0	12,500 0 0	1,737 8 0	
Neringepett and Erode.	Bamboos ...	159 3/7	1 0 0 per cart ...	159 11 5	279 8 0	119 12 7	
				10,922 3 5	12,779 8 0		
			Total showing aggregate Increase...			1,857 4 7	

* 25 lbs. a Maund.

D.

Statement showing the Particulars of Stock in Hand at the commencement and close of the official year 1871-72, *and the Extent of Increase or Diminution of the Bhowani Forest.*

Description of Timber or other Forest Produce.	Number of Cubic feet, etc.				Rate per Cubic foot, etc.	Total Valuation.	
1	2			3	4	5	6
Stock on 31st March 1871.	C. FEET.	CARTS.	TONS.	MDS.	RS. A. P.	RS. A. P.	RS. A. P.
Sandalwood	.....	.....	.....	* 800	3 2 0 per maund ...	2,500 0 0	2,500 0 0
Stock on 31st March 1872.							
Sandalwood	.....	.....	.....	1,389 1/5	3 2 0 per maund ...	4,341 0 0	
Railway fuel	.....	.....	1,963½	.....	3 0 0 per ton	5,490 8 0	10,231 8 0
					Total...	.....	12,731 8 0
Add total valuation of timber, etc., felled during the year as per column 7, Statement B.						.....	18,653 11 5
					Grand Tota ...	.....	31,385 3 5
Deduct total valuation of timber, etc., sold during the year as per Column 3, Statement C.						.....	10,922 3 5
							20,463 0 0
					Compare Remainder with Column 5...	.....	12,731 8 0
					Increase in Stock...	.....	7,731 8 0

*25 lbs. a Maund.

E.

Statement showing Timber, etc., disposed of under the License and Voucher system in the Bhowani Forest during the official year 1871-72.

Description of Timber or other Forest produce.	No. of Carts.	No. of Cubic feet.	No. of Maunds.	Rate of Seignorage.		Total Receipts.
				Per Cubic foot.	Per Cart.	
1	1A	2	3	4		5
				RS. A. P.	RS. A. P.	RS. A. P.
Teakwood	39	780	...	0 4 0	5 0 0	195 0 0
Blackwood	7	140	...	0 4 0	5 0 0	35 0 0
Vengay	80	960	...	0 4 0	3 0 0	240 0 0
Junglewood	70	840	...	0 4 0	3 0 0	210 0 0
Achawood	662½	7,950	...	0 4 0	3 0 0	1,987 8 0
Total...	858½	10,670	...			2,667 8 0

F.

Year.	Departmentally.	On License.	Total.	Free.
1871-72.	...	10,670	10,670	...

G.

Statement showing the Financial transaction of the Bhowani Forest for the official year 1871-72.

Year.	Gross Expenditure.	Cash Receipts.	Difference between Columns 2 & 3.	Value of Timber in Depôts.	Increase of value during the year.	Decrease of value during the year.	True result of the year calculated on Columns 4, 6 and 7.
1	2	3	4	5	6	7	8
1871-72 ...	20,591	16,402	—4,189	10,231	7,731	...	+3,542

(Signed) H. R. MORGAN, Lieut.-Colonel,
Deputy Conservator of Forests.

A.

Statement showing the Receipts and Disbursements of the Mudumallay Forest for the official year 1871-72.

	Classification.	Amount.	Total.	Remarks.
	Receipts.	RS. A. P.	RS. A. P.	
I.	Sale of timber at Depôts	6,431 8 9		
	(*a*) Supply of timber at Depôts to Department Public Works ...	14,868 3 7		
II.	Sale of timber removed by purchasers.	27 0 0		
III.	Duty on foreign timber	.....		
IV.	Permit fees and rent of jungles ...	100 0 0	.....	Firewood and bamboos rented.
V.	Grazing dues	.....		
VI.	Sale of fruits, etc.	.....		
VII.	Sale of confiscated timber	.....		
VIII.	Fines and forfeitures...	101 3 8	.. ..	From drivers.
IX.	Miscellaneous	.....		
	Total Receipts...	.....	21,528 0 0	

Mudumallay Forest.—(Concluded.)

	Classification.				Amount.			Total.			Remarks.
	Conservancy and Working.				Rs.	A.	P.	Rs.	A.	P.	
I.	Timber expenses— felling, etc. ...				13	11	4				
	(*a*) Carriage of timber.				13,102	0	5				
II.	Purchase of stock and cattle... ...				181	1	4				
III.	Feed and keep of cattle				4,904	6	5				
IV.	Rent of leased forest and W. yard office				3,710	0	0				
V.	Charges in collecting revenue on grass, etc.				.....						
VI.	Plantation (Teak)				2,931	6	9				
VII.	Forest work, namely, cutting creepers, etc.				2	0	0				
X.	Communications and Buildings ...				2,138	9	8				
	Total Conservancy and Working...				26,983	3	11	.....			
	Establishments.										
I.	Salaries	16,170	7	9	.....						
II.	Allowances	1,200	0	0	.....						
		17,370	7	9	.....						
III.	Contingencies... ...	167	12	0							
					17,538	3	9				
	Grand Total of Expenditure...							44,521	7	8	

B.

Statement showing the quantity of Timber felled in the Mudumallay Forest during the official year 1871-72.

Division of Range.	Description of Timber and other Forest produce.	No. of Cubic feet.	No. of Mds.	No. of Tons.	No. of Cart loads.	Rate of Valuation.	Total Valuation.
1	2	3	4	4 A.	4 B.	5	6
Mudumallay..	Teakwood ...	146½	...	...	...	Rs. A. P. 0 12 0 per c. ft.	Rs. A. P. 109 11 0
						Total...	109 11 0

C.

Statement showing in detail the sale and supply of Timber of different descriptions from each Depôt of the Mudumallay Forest during the official year 1871-72.

Name of Depôt.		Description of Timber or other Forest produce ; number of cubic feet or maunds sold and supplied ; and rate of valuation per cubic foot or maund.				Total Valuation.	Amount actually realized. Sale to Public.	Amount actually realized. Supply to D. P. W.	Amount actually realized. Total.	Difference between Columns 3 and 4.	Explanation of difference.
1		2				3	4			5	6
			Sale C. ft.	Supply C. ft.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Mudumallay.	Sale ...	Teakwood ...	4,000	248¼	0 12 0	3,186 3 0	3,000 0 0	372 6 0	3,372 6 0	+186 3 0	The cost of carriage by Circar carts.
Tippacadu ...	...	Do. ...	.....	247	1 0 0	247 0 0	.....	432 14 2	432 14 2	+185 14 2	
	...	Vengay ...	.....	466	1 0 0	466 0 0	.....	407 15 5	407 15 5	—58 0 7	
Ootacamund...	...	Teakwood ...	1,912½	6,765½	1 4 0	10,847 3 0	3,363 0 9	13,530 8 0	16,893 8 9	6,046 5 9	By the increased rate which varied from 14 Annas to 2 Rupees.
		Blackwood...	34½	62½	1 4 0	120 10 0	68 8 0	124 8 0	193 0 0	72 6 0	
		Total...	5,946¾	7,788¾	.....	14,867 0 0	6,431 8 9	*14,868 3 7	21,299 12 4	6,432 12 4	

D.

Statement showing the particular of stock in hand at the commencement and close of the official year 1871-72 *and the extent of increase or dimunition of the Mudumallay Forest.*

Name of Depôt and description of Timber and other Forest produce.	Number of Cubic feet.	Number of Maunds.	Rate per Cubic foot or Maund.	Total Valuation.
1	2	3	4	5
Stock on 31st March 1871.	RS.	RS.	RS. A. P.	RS. A. P
Mudumallay Teak ...	92,942⅔	...	0 12 0 Per C. foot.	69,707 0 0
Tippacadu Teak and some Vengay*	52,429½	...	1 0 0 dó.	52,429 8 0
Musnigoody Teak	2,898	...	1 0 0 do.	2,898 0 0
Seegoor Teak	4,233¼	...	1 0 0 do.	4,233 4 0
Ootacamund Teak & Black† .	7,504¼	...	1 8 0 do.	11,256 6 0
Total...	1,60,007¾	...	.....	1,40,524 2 0
Stock on 31st March 1872.				
Mudumalli and Terk ...	53,528½	...	0 12 0 do.	40,146 9 0
Tippacadu ,, ...	46,525¼	...	1 0 0 do.	46,525 4 0
Musingoody ,, ...	396¾	...	1 0 0 do.	396 12 0
Seegoor ,, ...	2,786¼	...	1 0 0 do.	2,786 4 0
Mysore ,, ...	29,031	...	1 0 0 do.	29,031 0 0
Ootacamund ,, ...	13,149½	...	1 4 0 do.	16,436 14 0
				1,35,322 11 0
				2,75,846 13 0
Add total valuation of timber felled during the year as per Statement B, Column 6			109 11 0	
Net surplus of value on timber stored in different Depôts during the year			10,305 14 0	
				10,415 9 0
			Grand Total...	2,86,262 6 0
Deduct total valuation of timber, etc., sold during the year as per Column 3, Statement C.			14,867 0 0	
Destroyed by fire, white-ants, etc.			750 0 0	
				15,617 0 0
				2,70,645 6 0
			Compare remainder with total under Column 5...	2,75,846 13 0
			Decreased in Stock...	5,201 7 0

* Because we have supplied to Department Public Works some Vengay during the year from this Depôt—*vide* Statement C.

† We have sold and supplied some Blackwood—*vide* do.

E.

Statement showing Timber, etc. disposed of under the License and Voucher System in the Mudumallai Forest during the official year 1871-72.

Description of Timber or other Forest produce.	Number of Trees.	Number of C. feet.	Number of Maunds.	Rate of Seignorage.		Total Receipts.
				Per Tree.	Per C. foot.	
1	1A	2	3	4		5
Junglewood	9	108	...	Rs. A. P. 3 0 0	Rs. A. P. 0 4 0	Rs. A. P. 27 0 0
Total...	...	108	...	...	...	27 0 0

F.

Statement showing Timber felled, etc., in the Mudumallai Forest during the official year 1871-72.

Years.	Departmentally felled.	On License.	Total.	Free.
	C. FEET.	C. FEET.	C. FEET.	
1870-71	3,154	...	3,154	...
1871-72	146½	108	254½	...

G.

Statement shewing the Financial transaction of the Mudimallai Forest for the officicl year 1871-72.

Year.	Gross Expenditure.	Cash Receipts.	Difference between Columns 2 and 3.	Value of Timber in Depôts.	Increase of value during the year.	Decrease of value during the year.	True results of the year calculated on Column 4, 6 & 7.
1	2	3	4	5	6	7	8
	Rs.	Rs.	Rs.	Rs. A. P.	Rs.	Rs.	Rs.
1871-72	44,521	21,528	—22,993	1,35,322 11 0	...	5,201	—28,194

Ootacamund,
1st *June* 1872.

(Signed) H. R. MORGAN, Lieut.-Colonel,
Deputy Conservator of Forests.

APPENDIX N.

OFFICE OF ASSISTANT CONSERVATOR OF FORESTS,
MANANTODDY, *7th June* 1872.

No. 66.

From

A. W. PEET, ESQ.,
Assistant Conservator of Forests, Wynaad Range,

To

COLONEL H. R. MORGAN,
Deputy-Conservator of Forests, Ootacamund.

SIR,—I have the honour to submit a revised copy of my Annual Administration Report on the Wynaad Forests, in accordance with the new forms, for the official year ending on March 31st, 1872.

SECTION I.

Inspection Tour of the Officer in Charge.—Having taken charge only on March 8th, and not having arrived at head-quarters until some days later, I did not see much of the forests before the end of the year. However, on March 15th, I went to the Kudricote forest to look over the logs which had been felled and squared last season. There is a considerable quantity of teak in this forest, but the proportion is far smaller than in the Chedlette District. On March 27th I started for Goondry, in order to gain some knowledge of the Chedlette forests, and to settle certain affairs connected with the Pulpully temple private forest, about which I purpose making a few remarks at the end of this report. In these forests I remained till the end of March. The timber here is very valuable. Some tracts seem almost virgin ; and throughout the Chedlette and Koorcheat Districts there is a large quantity of Teak, and a considerable variety of useful timber trees, such as Hone, Blackwood, Mutty, Vengay, and Bentek. Unfortunately almost the sole market for this range has been at Mysore, and there has been hitherto little demand for timber other than Teak. The difficulties of carting are so great in some parts that a large quantity of timber has been lying in the forests about Koorcheat for years. My first endeavours will be directed towards recovering as much of this timber as possible. Many of the logs are said to be too large to cart, and an attempt will be made, by way of experiment, to split some of them by means of wedges in the direction of the length instead of sawing them across as heretofore.

It may be possible, however, to hire elephants for the purpose of removing them.

It may be stated here that all the operations in the Wynaad forests are conducted on the departmental system : Coorumbers are engaged in the season to fell and square logs at a given rate a cubic foot : the carting is done by contract at fixed rates. I have lately renewed the contract at reduced terms.

SECTION II.

RESERVES.

A.—*Reserved Forests, Operations and contemplated Operations.*—During the official year felling has been carried on in the Kudricote and Chedlette forests ; the amounts are stated below.

The timber felled in the Kudricote forests is reserved at present for carting to the coast. A scheme has long been under consideration for making a small depôt at Tellicherry by carting timber down to Peria Pass.

Before leaving last month for Mysore, on the occasion of the sales of timber, I gave orders for the removal of a few Teak logs now at Manantoddy by way of experiment, but it was reported that too much rain had already fallen on the ghaut to render carting feasible. I purpose, there-

fore, carting timber after the monsoon. The timber felled in the Chedlette forests is almost invariably sent to Mysore; that felled last season is now being collected at Goondry, in readiness for floating towards Mysore. During the present year I propose to fell in a tract to the north-east of the Pulpully forest, which appeared to me to be almost virgin, except in parts where the system of Tukkul had been anciently adopted. Some felling will be done in Kudricote, but the amounts felled will depend on the state of the markets at Mysore and Tellicherry. There is a prospect of a small demand for certain descriptions of jungle-wood, and I therefore purpose making a small depôt at Manantoddy.

The *boundaries* of the Wynaad forests are not accurately determinable. There is a map by Lieutenant Fullerton which is useful as a general guide, but is not sufficiently accurate for the definition of boundaries. It is, I believe, professedly only a sketch-map based on the trigonometrical survey. The Appendix by Lieutenant Fullerton to the report for 1867-68 should be useful in the case of some of the disputed boundaries. An attempt will be made to supplement the employment of stone land-marks, which are not only removable but readily overgrown, by marking large trees along the boundaries and perhaps in some cases by digging a trench.

The *communications* in this range are not in a satisfactory state. The bridges leading from Goondry to Chedlette were no sooner repaired than they were reported to be in an unsound state. I have had them strengthened, but if they give way again I shall adopt the suggestion of Colonel Morgan, and make bridges with Teak planks. There are forest-huts at Chedlette, Goondry, and Kudricote, which I have lately repaired. Fresh roads are needed in some directions.

B.—*Fuel-reserves.*—There are neither large towns nor railways in this range, consequently no fuel-reserves have been formed.

C.—*Plantations.*—Hitherto no planting has been done. My predecessor cleared some ground for a Teak nursery in the Chedlette forests, and I have had it dug, irrigated, and sown; but, on account of my having arrived rather late in the season, I have had only one half of the nursery sown, since I was afraid that it might prove that the sowing was performed too near the commencement of the monsoon. Pits have been dug in favourable situations; bamboo clumps being in many cases cleared out previously.

SECTION III.

License and Voucher Forest-operations.—No such operations take place in this range. The forests are worked entirely on the departmental system, as stated in Section I.

SECTION IV.

Expenditure on Carting, Felling and Floating; Yield of Forests.

A.—*Timber felled.*—In the Chedlette forests 7,230 cubic feet of Teak were felled, and 2,400 cubic feet of Teak in the Kudricote, giving a total of 9,630 cubic feet. Coorumbers have hitherto been paid at the rate of 1 Anna a cubic foot for felling and squaring. A small quantity only was felled this year on account of the dullness of the market at Mysore.

B.—*Timber carted.*—From the Chedlette forests 3,628½ cubic feet of Teak were carted to Goondry. The same quantity of Teak was carted from Hirnandy to Mysore, with the addition of 4,719½ cubic feet of Teak previously stored in the Hirnandy depôt.

The carting is performed by contract. The rates during the year were:—From the Chedlette forests to Goondry, 3½ Annas a cubic foot for logs containing more than 25 cubic feet; 3 Annas a cubic foot for logs of 25 cubic feet and under. From Hirnandy to Mysore, 2½ Annas a cubic foot for logs containing more than 25 cubic feet; 2 Annas a cubic foot for logs of 25 cubic feet and under.—Carting from Kudricote to Manantoddy was performed at the rate of 6 Annas a cubic foot.

The terms of the new contract will form part of the next Annual Report.

C. *Timber floated.*—The rate for floating timber from Goondry to Hirnandy was 1 Anna a cubic foot.

		RS.	A.	P.
D.—*Timber sold.*—Sale of Bamboos		7	8	0
,, of Hone		83	10	0
,, of Teak		279	4	3
,, of Timber to Department Public Works.		1,466	4	0
Total...		1,836	10	3

The third item of Rupees 279-4-3 refers to timber felled in Turnbull's time, and afterwards confiscated by the Mysore Government for the reason that it had been stored in the Mysore territory. The claims of the Mysore Government were disputed, and they sent a Transfer Receipt to my predecessor, Mr. Winter, for the above amount. This does not represent the full value of the timber, and I am, therefore, making inquiries into the subject.

SECTION V.

FINANCIAL RESULTS.— *Vide* Statement A appended.

Synopsis of Financial Results:—

Year.	Gross Expenditure.	Receipts.	Result.	Decrease in Value of Stock.	Net Result.
	RS.	RS.	RS.	RS.	RS.
1871-72	10,519	1,837	— 8,682	— 3,326	— 12,008

The balance against the forests during the official year is owing, so far as I can judge, firstly, to the fact that no sales took place at Mysore; and, secondly, to the fact that the value of stock had been highly estimated on account of the rumoured formation of a railway leading to Mysore. When that project was started our depôt at Mysore was largely stocked with timber, and the rate which the then Forest Officers were justified in expecting to realize was Rupees 1-4-0 a cubic foot. The railway scheme has continued in abeyance, and consequently the market-rate of Teak has diminished to 1 Rupee a cubic foot at Mysore. I have reduced the estimates to the present market-rates.

SECTION VI.

GENERAL REMARKS.

Establishment—Consists of one Writer, one Goomastah working in the Deputy-Conservator's office, one Sub-Overseer for general work, and another Sub-Overseer at the Mysore Depot, one Duffadar, and ten Peons.

Health of the Establishment.—During the year my predecessor, Mr. Winter, has gone home on sick leave; one Overseer has died; one was absent on sick leave at the close of the year; one is now in Mysore hospital ill with fever; the Writer has suffered from sore eyes, and there have been a few other cases of fever and dysentery. There is no sickness at present, with the exception of the Overseer at Mysore.

Since I have been here I have had no cause of complaint against any of my subordinates or Assistants.

Forest Produce.—On this subject I cannot give trustworthy information, since my knowledge of the forests is limited. Orders have been given for the collection of gums and resins; but hitherto the Coorumbers have been otherwise employed, and no specimens have been in. I have

been offered as much as 18 Rupees a bandy-load for Kadukkay nuts and Siyakkay pods, and have given orders to the Coorumbers to collect these products as well as resins and gums.

Hitherto the Mysore merchants have gathered these fruits in parts of our forest where surveillance is difficult. A short time back seventeen bandy-loads were passed into Mysore.

PULPULLY FORESTS.

With reference to the Pulpully forests I would submit a few remarks. The above-mentioned forests have, according to Lieutenant Fullerton, an area of from 20 to 25 miles; but I should be inclined to estimate the area at a somewhat higher figure.

These forests were demarcated in 1866-67, but the officer who conducted these operations has since died, and I believe that only one, if one, of the original Assistants is to be found. Orders have been given to the Peons to discover the boundary-stones as accurately as possible, and endeavours will be made to render these more easily ascertainable by marking large trees along the boundary, and making such additional separative marks as may be hereafter determined upon. A boundary shown simply by stones is very hard to define.

I regret extremely that the prospect which opened up some few years ago of purchasing a lease of these lands for the Government has not been realized. At that time a complaint was made to Mr. Cherry, then Assistant Conservator of the Wynaad Forests, by the owner of the Temple lands, that the latter was being defrauded by the lessee, Kencha Gowdah. It was stated that the lessee paid a stump-fee for the right of felling, and negotiations were commenced on behalf of Government for the lease of the forest by the payment of a slightly higher stump-fee; these negotiations subsequently failed. From the time the complaint was lodged against Kencha Gowdah till the present time no passports were granted by the Wynaad Forest Department. The forest is now sub-let by Kencha Gowdah to one Narasimiah for Rupees 6,000 a year. The result of the prohibition of passports is that there is a quantity of timber stored, numbering over five thousand logs, and since the charge against Kencha Gowdah has been withdrawn there is no longer any reason for withholding passports. The Deputy-Collector, Mr. Underwood, allowed that passports should be granted, and elicited the fact that the sum paid by the lessee, Kencha Gowdah, to the owner of the forests is extremely small, being less than 1 Anna a cubic foot; whence it follows that they can generally under-sell us in the market, for their establishment is comparatively inexpensive, and they confine their operations to a sole area, until they have worked it only too completely.

This brings me to another point, namely, that giving over a large tract of valuable forest without supervision is contrary to the principle of conservancy which prompted the formation of a forest department; for, especially when such a tract is sub-let, the chief desire will be to make as much money as possible off-hand by the sale of every piece of timber approaching marketable value. My request, therefore, is that fresh tenders may be allowed for the purchase or renting of this tract of forest by Government—

(i.) Because it separates one part of the Wynaad Range from the other; and thus increases enormously the duties of surveillance, since, with felling operations constantly going on within the radius of our forests, it is necessary to watch continually, for fear lest the boundaries should be over-stepped.

(ii.) Because the work of our Forest Peons is largely increased, for the felling attains much larger proportions in this forest than would be the case were the same tract under our department; and we have lately been forced to adopt the principle of marking trees felled in the Pulpully forests as they lie in the jungle. We mark with a private hammer the felled log and the stump from which it was felled, in order to prevent them cutting timber in our forests and carting it to their depôts.

(iii.) Because the extent to which they are felling is contrary to the principle of conservancy.

(iv.) Because we are under-sold to such an extent as barely to realize a profit, and the commercial value of timber is unavoidably depreciated since the market is constantly over-stocked.

I have the honour to be,
Sir,
Your most obedient servant,

(Signed) A. W. PEET,
Assistant Conservator of Forests.

A.

Statement showing the Receipts and Expenditure of the Wynaad Forests for the year 1871-72.

Items.	Amount.		Remarks.
	Rs. A. P.	Rs. A. P.	
RECEIPTS.			
I. Sale of Timber	362 14 3		* This item includes Rupees 491 being principal tax of 2 Annas a bandy-load paid for the timber lying in the Mysore Depot.
Do. to D. P. W.	1,466 4 0		
II. Do. of Bamboos	7 8 0		
		1,836 10 3	
A.—CONSERVANCY AND WORKING.			
I. Timber expenses for felling	436 13 9		
For conveyance to depots	*4,947 0 0		
II. Purchase of tools	16 12 0		
VI. Plantation	25 14 0		
X. Communications	58 14 6		
	5,485 6 3		
B.—ESTABLISHMENT.			
I. Salaries	4,155 12 3		
II. Allowances	670 12 0		
III. Contingencies	207 7 8		
	5,033 15 11		
Total Expenditure...	.....	10,519 6 2	

B.

Statement showing the extent of departmental Felling in the Wynaad Range for the year 1871-72.

Division of Range.	Description of Timber and other Forest-produce.	Number of Cubic Feet.	Number of Maunds.	Rate of Valuation per Cubic Foot.	Rate of Valuation per Maund.	Total Valuation.	Remarks.
1	2	3	4	5	6	7	8
				Rs. A. P.		Rs. A. P.	
Kudricote	Teak	2,400	.....	0 8 0	.....	1,200 0 0	The Hone mentioned in the report under the heading "Timber Sold" was not felled during the year. The price received was in liquidation of an outstanding debt.
Chedlette	Do.	7,230	.....	0 8 0	.....	3,614 12 0	
Total ...		.....	.....	... ...	.....	4,814 12 0	

C.

Statement showing Sales from each Depôt of the Wynaad Forests during the year 1871-72.

Name of Depot.	Description of Timber or other Forest-produce; Number of Cubic Feet or Maunds sold and rate of Valuations per Cubic Foot or Maund.	Total Valuation.	Total Amount actually realized.	Difference between Columns 3 and 4.	Explanation of Difference.
1	2	3	4	5	6
		Rs. A. P.	Rs. A. P.	Rs. A. P.	
Manantoddy	977½ cubic feet of Teak, valued at Rupee 1 a cubic foot.	977 8 0	1,466 4 0	+ 488 12 0	The difference arose from the fact that the purchaser required timber of special dimensions and paid at a higher rate for the advantage of selection.
Chedlette	1,004 do. do., at 8 As. do.	502 0 0	362 14 3	— 139 1 9	
	Total ...	1,479 8 0	1,829 2 3		
Total showing aggregate increase or decrease ...		.....	.....	+ 349 10 3	

D.

Statement showing the particulars of Stock in hand at the commencement and close of the official year 1871-72.

Name of Depots.	Number of Cubic Feet.	Number of Maunds.	Rate per Cubic Foot.	Total Valuation.			Remarks.
1	2	3	4	5		6	
			Rs. A. P.	Rs. A. P.		Rs. A. P.	
STOCK ON HAND ON MARCH 31ST, 1871.							
Mysore	12,789¼	...	1 4 0	15,986 9 0			The item "Timber not accounted for" dates from the time when Mr. Turnbull had charge of the forests. Mr. Cherry found a considerable deficiency, and recovered part of the amount from the Koorcheat forests. It is said that many felled logs still remain there; if so, an attempt will be made to recover them this year.
Hirnandy ...	904⅛	...	1 0 0	904 8 0			
	...	...	.....	.....			
Goondry	3,529¼	...	0 12 0	2,646 15 0			
Baigur	21¼	...	1 0 0	21 4 0			
Koorcheat ...	9,528¼	...	1 0 0	9,528 4 0			
Manantoddy ...	1,489¾	...	1 4 0	1,862 0 0			
Kudricote ...	...	...	.....	.....			
Timber not accounted for...	...	...	.....	1,401 2 10			
						32,350 10 10	
STOCK ON 31ST MARCH 1872.							
Mysore	21,136¾	...	1 0 0	21,136 12 0			
Hirnandy ...	235½	...	0 14 0	206 1 0			
	806	...	0 8 0	403 0 0			
Goondry	400	...	0 12 0	300 0 0			
Baigur	21¼	...	1 0 0	21 4 0			
Koorcheat	10,489½	...	0 8 0	5,244 12 0			
Manantoddy ...	512¼	...	1 0 0	512 4 0			
Kudricote ...	2,400	...	0 8 0	1,200 0 0			
						29,024 1 0	
						61,374 11 10	
Add total valuation of timber felled as per Column 7, Statement B.				4,814 12 0			
Do. increased value realized by timber transported from the Forests to Market Depots.				3,186 1 0			
Do. omission made in last year's stock valuation				0 3 0			
						8,001 0 0	
			Total...	.....		69,375 11 10	
Deduct total valuation of timber sold as per Column 3, Statement C....				1,479 8 0			
Do. decrease in valuation of last year's stock.				8,446 15 0			
Do. value of timber not accounted for in any of the accounts				1,401 2 10			
						11,327 9 10	
						58,048 2 0	
Compare remainder with total under Column 5.				.....		61,374 11 10	
			Decrease in value of Stock...	.....		3,326 9 10	

Statement showing the Timber, &c., disposed of under the License and Voucher System during 1871-72.

Description of Timber or Forest-produce.	Number of Carts.	Number of Maunds.	Rate of seigniorage or sale per Cubic Foot or Maund.	Total Receipts (under each Head.)
1	2	3	4	5
Bamboos	10	.....	0 12 0	7 8 0
Total ...				7 8 0

MANANTODDY,
7th June 1872.

(Signed) A. W. PEET,
Assistant Conservator of Forests.

APPENDIX O.

NELAMBUR, *27th May* 1872.

From

J. FERGUSON, ESQ.,
Assistant Conservator of Forests,

To

MAJOR R. H. BEDDOME,
Conservator of Forests.

SIR,—I have the honour to forward the Administration Report of the Nelambur Range for the official year 1871-72.

Logs dragged during the year into Forest Depôts by Contract.

—	No.	Candies.	Value.
			RS.
Logs of Teak...	260	528	6,336
Do. Blackwood	23	46	644
Do. Benteak	420	900	3,600
Do. Kurrimurda ...	183	381	1,524
Do. Poomurda	3	8	24
Do. Errul	280	563	1,689
Total...	1,169	2,426	13,817

Cash by private sales amount to Rupees 8,489-0-7, and value of stock remaining in Calicut depôt Rupees 2,593-6-11, and value of stock in Forest depôts Rupees 27,671-8-3, aggregating a total of Rupees 30,265-15-1 value of stock on hand on the 31st March 1872.

Plantations.—Teak seedlings planted out during the year in Nellicutta 46,000, which with 75,000 put out in 1870 gives the aggregate of 120,000 plants. Maintenance of the older plantations have been very fully carried out during the year.

Forest demarcation and survey operations were resumed in November, and the remaining natural forests, Arambra Kutta Mala and the Manglasheries parambas (near Arekode), with area planted yearly in the Nelambur plantations, have all been demarcated and surveyed, maps not yet issued.

Floating Operations for the year.—672 logs of sorts, 8,202 saplings, and 7,796 bamboos have been forwarded to Calicut depôt.

General Remarks.—During the year under review from repeated attacks of sickness I was forced to avail of three months "privilege leave" from 3rd February till the 2nd instant, when I returned to duty much benefited by my sojourn on the Neilgherries. I regret that

neither planting nor floating operations have been carried out efficiently the past year from repeated change of Overseers (and under local influence) ; a wealthy Nair belonging to the place was appointed to the vacant Overseer's post on the 20th April 1871 ; he engaged to supply labour and floating contractors at fair rates ; this he utterly upset, and abandoned the work on the 10th of June ; and on the 19th my office writer (once an experienced Coffee Superintendent) was appointed Acting Overseer professing his ability for the post ; he was well able to give satisfaction had he been so inclined ; but like his predecessor trifled with important operations, and when remonstrated with, absconded, without giving warning, on the 6th of November ; and on the 20th a Tirumulpad near Wandur was appointed to the post ; he is a most respectable man in his class, and although neither very intelligent nor experienced, he has conducted operations much more economically than any of his predecessors, I regret sickness prevented me from giving the amount of supervision to operations that I could have wished. With difficulty two contracts were obtained to float the timber stock into the Calicut depôt, and both contractors exceeded the specified time of delivery, bringing it late into the market ; and this year our stock of timber was both limited in quantity and inferior in quality, and although every endeavour was made to send the saplings into the early market, only about two-thirds were got in late in the season and mostly remain unsold ; hence the small receipts for the year. Weeding and pruning operations have been very fully carried out ; and to supplement the small areas planted out the past years, two hundred acres fully have been felled and now nearly cleared and ready, and the nursery abundantly stocked with fine seedlings to be planted out as soon as the season opens. The remaining one-third of last season's stock of saplings are many of them very fine as also a larger quantity of timber of superior quality, for which arrangements have been already made to bring the whole forward early in the season ; and with a favourable market I fully expect to show a handsome return next year, all the more so from the active interest Mr. MacGregor, the Collector, has taken (during my absence) to enforce operations being carried out and securing floating contracts, to whom my best thanks are due.

Operations.

46,000 teak seedlings planted out.
3,000 acres weeded.
1,200 do. pruned.
200 do. cleared for fresh planting.
1,022 logs of teak and junglewood felled.
1,169 do. dragged into Forest depôts.
672 do. floated to Calicut depôt.
25,000 saplings felled.
14,370 do. collected.
8,202 do. floated to Calicut depôt.
8,700 bamboos felled.
7,013 do. floated to Calicut depôt.
13 miles plantation fire-traced 10 feet wide.
1,153 logs fire-traced in depôts.

Financial Results.— *Vide* Statement appended.

A.

Statement showing the Receipts and Charges of the Nelambur Forests for the official year 1871-72.

	Rs. A. P.	Rs. A. P.
Receipts—		
I.—Sale of timber and Sandalwood brought to depôts by Government agency	8,389 0 7	
II.—Sale of timber, firewood, bamboos, and charcoal removed from the forests by purchasers, including seigniorage	119 11 11	
III.—Duty on foreign timber	... ...	
IV.—Permit fees, and rent of jungles and privileges	... ...	
V.—Grazing dues	... ...	
VI.—Sale of fruits, babool pods, and other minor forest-produce	... .	
		8,508 12 6
A.—Conservancy and Working.		
I.—Timber expenses for felling, cutting, clearing, sawing, and the transport of timber by land or water to depôts; also charges for storing, securing, watching, piling, and arrangements for selling timber	5,022 15 9	
II.—Purchase of elephants, cattle, and dead stock, tools and plant	230 12 0	
III.—Feed and keep of elephants and cattle	... ...	
IV.—Rent of leased forests and seigniorage paid for timber felled in leased forests, shares of villagers and others in the revenue of forests	5,364 0 0	
V.—Charges connected with the collection of revenue on grass, fruits, and miscellaneous produce	... ...	
VI.—Plantations	8,462 10 7	
VII.—Forest work, viz., cutting of creepers, protection of forests or trees against fire, and other work for the conservancy and improvement of the forests, charges for selecting, marking, and girdling of the trees to be felled	.. ..	
VIII.—Forest survey, Topographical and Valuation survey, to ascertain the contents of forests and annual rate of timber production	... ...	
IX.—Experiments to test the value of timber of different kinds	... .	
X.—Communications, buildings, and minor works, fences, boundary pillars, and posts, and boundary paths	11 8 0	
Total of Conservancy and Working...	19,091 14 4	
B.—Establishment.		
I.—Salaries	7,080 3 1	
II.—Travelling allowances	715 13 10	
III.—Contingencies	50 10 5	
Total of Establishments...	8,446 11 4	
Total of Expenditure...	... ...	27,538 9 8

B.

Statement shewing the quantity of Timber felled in the Nellumbore Forest during the official year 1871-72.

Division of Range.	Description of Timber and other Forest produce.	Number of Maunds.	Number of Cubic feet.	Rate of valuation per Cubic foot.	Rate per Maund.	Total Valuation.	Remarks.
1	2	3	4	5	6	7	8
						Rs. A. P.	
Nellumbore.	294 Teak	.....	Not stated.	Not stated.	...	3,262 0 7	
	23 Blackwood ...	.....			...	441 11 7	
	3 Poomurdu ...	.....			...	25 12 2	
	280 Errul ...	.....			...	1,249 6 10	
	453 Benteak ...	.....			...	2,133 11 4	
	210 Kurmurdu ...	.....			...	1,400 0 0	
	30,633 Saplings ...	.....			...	8,811 13 4	
	9,130 Bamboos ...	.....			...	614 3 7	
	Total..	.....	...	...	...	17,928 11 5	

C.

Statement shewing in detail the sale and supply of Timber of different descriptions from the Depôt of the Nellumbore Forest during the official year 1871-72.

Name of Depôt.	Description of Timber or other Forest-produce, number of Cubic feet or Maunds sold.	Total Valuation.	Total Amount realized.	Difference between columns 3 and 4.	Explanation of difference.
1	2	3	4	5	6
	C. K. B. V. Rs. A.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Nellumbore.	172 Teak logs. 100 0 0 0 at 7 0	700 0 0			
	1 do. ... 1 4 13 0 ,, 10 0	10 7 9			
	7 do. ... 4 14 18 3½ ,, 5 0	22 15 6			
	220 do. ... 238 7 12 6 ,, 8 8	2,025 10 8			
	400	2,759 1 11	2,759 1 11		
	39 Kurrimurda 78 13 12 11¼ ,, 3 0	235 11 10			
	33 do. ... 50 1 3 5¼ ,, 4 0	200 3 0			
			435 14 10		
	72	435 14 10			
	46 Errul ... 48 0 0 0 ,, 3 0	144 0 0	144 0 0		
	230 Benteak ... 281 8 2 12 ,, 3 0	844 0 3			
	3 do. ... 9 23 23 12 ,, 5 0	49 14 5			
	409 do. ... 703 3 15 15 ,, 4 0	2,812 9 9			
	642	3,706 8 5	3,706 8 5		
	54 Poomurdu... 70 0 0 0 ,, 2 0	140 0 0	140 0 0		
	7 Blackwood .. 5 0 17 15 ,, 10 0	50 4 10	50 4 10		
	4 Saplings at Rs. 5-14-11...	23 11 9			
	1 do.	3 0 0			
	136 do. ,, ,, 1- 0- 0 = ...	136 0 0			
	2 do. ,, ,, 0-12- 0 = ...	1 8 0			
	381 do. ,, ,, 0- 8- 0 = ...	190 8 0			
	379 do. ,, ,, 0-11- 0 = ...	261 4 0			
	100 do. ,, ,, 0-10- 0 = ...	62 8 0			
	3 do. ,, ,, 0- 7- 4 = ...	1 6 0			
	320 do. ,, ,, 0- 4- 0 = ...	80 0 0			
	442 do. ,, ,, 0- 3- 0 = ...	82 14 0			
	2 do. ,, ,, 0- 2- 0 = ...	0 4 0			
	Broken saplings	0 6 0			
	1,770	843 5 9	843 5 9		
	500 Bamboos, at Rs. 12 per cent. = ...	60 0 0			
	208 do. ,, ,, 10 do. = ...	20 14 5			
	2,291 do. ,, ,, 8 do. = ...	192 7 8			
	2,017 do. ,, ,, 1 do. = ...	20 2 9			
	225 do. ,, ,, 7 do. = ...	15 12 0			
	80 Broken bamboos	0 8 0			
	5,321	309 12 10	309 12 10		
	Total...	8,389 0 7	8,389 0 7	... ...	

D.

Statement shewing the particulars of stock in hand at the commencement and close of the official year 1871-72 *in the Nellumbore Forest.*

Description of Timber or Forest-produce.	Number of Cubic feet.	No. of Maunds.	Rate per Cubic foot or Maund.	Total Valuation.	
1	2	3	4	5	6
Stock on 31st March 1871.			RS. A. P.	RS. A. P.	
381 Teak	... ...	...	... ...	4,453 7 8	
20 Kurrimurdu.	... ...	...	... ...	2,290 11 5	
54 Poomurdu.	... ...	...	... ...	866 15 8	
46 Errul ...	... ...	...	... ...	584 6 4	
553 Benteak ...	... ...	...	... ...	4,418 8 11	
7 Blackwood.	... ...	...	... ...	70 0 0	
5,444 Saplings ...	... ...	...	... ...	9,066 1 3	
					21,750 3 3
Stock on 31st March 1872.					
275 Teak ...	567 14 8 10	...	12 0 0	6,811 2 10	
23 Blackwood...	46 9 7 6	...	14 0 0	651 6 9	
404 Benteak ...	842 13 13 1¼	...	4 0 0	3,370 4 6	
158 Kurrimurdu.	350 14 16 9¼	...	4 0 0	1,402 7 1	
280 Errul	563 3 10 7½	...	3 0 0	1,689 6 10	
3 Poomurdu.	8 14 2 2	...	3 0 0	25 12 2	
34,307 Saplings ...	... ...	...	... ...	16,011 0 2	
3,809 Bamboos ...	... ...	...	... ...	804 6 9	
					30,265 15 1
					52,016 2 4
Add total valuation of Timber and Forest-produce felled during the year as per Column 7, Statement B.				... ...	17,928 11 5
				Total...	69,944 13 9
Deduct total valuation of Timber, etc., sold during the year as per Column 3, Statement C.				8,389 0 7	
Decrease in value of stock				1,023 15 0	
					9,412 15 7
					60,531 14 2
Compare remainder with total under Column 5				... ...	52,016 2 4
Increase in stock				... ...	8,515 11 10

E.

Statement.—Not furnished.

NELAMBUR,
24*th May* 1872.

(Signed) J. FERGUSON,
Assistant Conservator of Forests.

APPENDIX P.

DEPUTY-CONSERVATOR'S OFFICE,
MANGALORE, *1st June* 1872.

Report No. 83.

From

MR. W. CARROLL,

Overseer in charge of Deputy-Conservator's Office, South Cana

To

MAJOR R. H. BEDDOME,

Conservator of Forests, Madras Presidency.

SIR,—I have the honour to submit the Annual Administration Report of the South Canara Forests for the official year 1871-72.

Introductory Remarks.—On the 27th February 1872 the Deputy-Conservator of Forests left the Range on special duty, and left me in charge, and it has therefore devolved on me to write out this summary.

I regret the delay in forwarding the same, as the new forms, and the attention required by Government Order, No. 609, dated 16th April 1872, and sending matter for report to the Deputy-Conservator, which was afterwards returned to me, has prevented me from submitting it earlier.

RESERVED FORESTS—*Quantity of Timber, etc., felled.*—In the Oodipee and Cundapore Range Forests 6,906 cubic feet of timber, 4 boats and 18,750 bamboos were felled during the year under review.

793 Cubic feet of this timber and 20,550 bamboos have been floated to the coast depôts. The remainder are still in the forests as no elephants could be obtained. The hire of elephants is rather high, and are not at all times to be obtained.

In Cassergode Range 2,507 cubic feet of timber and 7,450 bamboos were felled, and 2,835½ cubic feet of timber and 4,400 bamboos were floated down to the coast, at a cost of Rupees 1,799-0-7 or 10 Annas per cubic foot.

Floating timber down the Puiswany river is exceedingly difficult. The Deputy-Conservator therefore put a stop to floating, till means are taken for blasting the rocks. The timber lying in the forests is being carted down to the coast. Two pairs of strong country bullocks were purchased in February last out of the amount sanctioned by Government in Government Order, No. 2,027, dated 30th November 1871. Serviceable carts might be built by the department cheaper than they could be purchased ready made.

Extensive felling has been carried on during the year in the Ooparangady forests; 16,180 cubic feet of timber, 58 poon spars, 4 boats and 16,500 bamboos have been felled, and the greater portion of it has been dragged and floated down to the coast.

Statement B. shows the quantity of timber felled departmentally from the ghaut forests at a cost of Rupees 2,282-9-5. The expense incurred in dragging, carting, and floating the same amounts to Rupees 9,466-10-6.

Statement F. shows the quantity floated down during the year to the coast depôts.

Timber sold to Merchants from the depôts.—Rupees 7,834-11-0 have been realized. This is an inconsiderable sum, but it is anticipated that a larger amount will be realized during the present year from the efforts that are being made to have always a large supply of good seasoned timber in all the depôts. Statement C. will show the quantity of timber sold to merchants and to the Department of Public Works.

The Collector has leased out the jungles for Sandalwood stills for Rupees 3,725 against Rupees 9,610 for last year, out of which Rupees 3,397-12-0 have been realized during the year.

The cause of the decrease is owing to the price on firewood being raised from 3 Pies to 9 Pies per head-load.

Firewood valued at Rupees 8,209-6-6 has been removed by them, against Rupees 9,075-0-6 for last year.

The Catechu jungles in Cundapore taluq have also been rented out for one year for Rupees 9,360, out of which Rupees 6,052-12-8 have been realized in this year's accounts; and Rupees 807 have also been credited, being rent of Cardamum jungles in the Nerriah forests (Ooparangady taluq.)

Contemplated Operations.—The Deputy-Conservator has proposed storing all the timber that arrives at Mangalore on the side of the river nearest the sea, as there is no available piece of land large enough for our wants in the town. Large depôts have also been formed in the other taluqs, and endeavours will be made to have them all well stocked with good timber.

PARAPA TEAK PLANTATION—*Plantations.*—5,087 plants were put out during the year, and 1,650 casualties re-placed; 25 murrahs of seeds (Teak) were collected, and a large nursery has been made to supply our wants during the present year. The expenditure this year has been Rupees 554-1-6, making a total expenditure from the commencement of Rs. 4,386-15-1.

About 15 acres of land has been felled, and the same will be planted out during the present year.

Small pieces of land at Yenecul, Bolupah, and Neranky, in the Ooparangady taluq, have been planted out with Teak, Jack, Wild Jack, etc., at a cost of Rupees 151-0-1.

LICENSE AND VOUCHER-FORESTS.—Statement E. shows the quantity of timber, etc., removed from the forests under the license and voucher system. The amount realized under this head is less by Rupees 2,457-15-1 as shown in last year's accounts.

Forest Prosecutions.—Twelve persons were detected in smuggling timber, and were brought before the several Sub-Magistrates of the district. Three (3) were punished and nine (9) acquitted.

Yield of Forests.—25,986½ cubic feet of reserved and junglewood timber, 58 poon spars 8 boats, and 42,753 bamboos have been felled departmentally. The quantity felled by the Department Public Works on seigniorage under their own agency was 298 cubic feet, and the quantity removed by purchasers is shown in Statement E.

Financial Results.—Ever since the organization of the department, the receipts never amounted to the amount realized this year, viz., Rupees 41,189-7-9. The net profit is Rupees 18,137-9-11 against Rupees 8,205-13-11 for last year.

GENERAL REMARKS.—*Health of Establishment.*—Fever throughout the year has been prevalent. Almost all the establishment had more or less suffered. I myself had some sharp attacks, but I am glad to report that no deaths occurred during the year.

Forest Cattle.—Out of the twelve buffaloes which were purchased some years ago, six (6) have died, and two (2) were killed by tigers. The remaining four (4) are of no use whatever to the department.

Forest Products.—Seeds of different trees have been forwarded to the Central Office and specimens of the large forest trees in flower have been forwarded to the Conservator. Five (5) maunds of "Naramara" (Hopea Wightiana) gum was collected for the Collector of the district.

Conduct of the Establishment.—The Overseers and the other subordinates have, I think, given the Deputy-Conservator satisfaction during the year.

I have the honour to be,

Sir,

Your most obedient servant,

(Signed) W. CARROLL,

Overseer in charge of Dy. Conservator's Office,

South Canara.

A.

Statement showing the Receipts and Expenditure of the South Canara Forests for the official year 1871-72.

	Rs.	A.	P.	Rs.	A.	P.
I.—Sale of timber brought to depot by Government Agency.	7,834	11	0			
Value of timber supplied to Department of Public Works and other Departments	11,052	14	9			
II.—Sale of timber, firewood, etc., removed from the forests by purchasers including seigniorage	3,682	5	10			
IV.—Permit fees, rent of jungles, and privileges...	18,466	15	2			
VI.—Sale of fruits, babool pods, and other minor forests produce	29	3	11			
VII.—Sale of confiscated drift and warf timber	65	2	0			
IX.—Miscellaneous receipts	58	3	1			
Total receipts...	...	...	...	41,189	7	9
I.—Timber expenses for felling, cutting, clearing, etc. ...	9,427	13	4			
II.—Purchase of elephants, cattle, etc...	328	8	8			
III.—Feed and keep of do.	3,196	0	2			
IV.—Rent of leased forests and seigniorage paid for timber felled in leased forests	103	0	0			
V.—Charges connected with collection of revenue on grass, fruits, etc....	82	5	9			
VI.—Plantations	705	1	7			
VII.—Forest work, viz., cutting of creepers, etc.	7	12	6			
X.—Communications, etc, ...	368	2	10			
Total...	14,218	12	10			
I.—Salaries	9,993	5	0			
II.—Travelling allowances, including batta, etc.	1,582	8	2			
III.—Contingencies	317	10	3			
Tolat ..	11,893	7	5	26,112	4	3

B.

Statement showing the Quantity of Timber felled in the South Canara Forests during the year 1871-72.

Division of Range.	Description of Timber and other Forest-produce.	Number of Maunds.	Number of Logs.	Cubic feet.	Rate.	Value.
1	2	3	4	5	6	7
					Rs. A. P.	Rs. A. P.
South Canara.	Teakwood	...	5	103¾	0 10 0	64 13 6
	Blackwood	...	76	1,350	0 10 0	843 12 0
	Poon Spars	...	58	each.	50 0 0	2,900 0 0
	Wild Jack	...	63	3,292	0 8 0	1,646 0 0
	Jackwood	...	2	52½	0 8 0	26 4 0
	Kiralboghee... ...	...	39	839	0 8 0	419 8 0
	Tirawa	...	15	305	0 8 0	152 8 0
	Banapu or Matty...	...	279	5,899¾	0 8 0	2,949 14 0
	Benteak	...	97	2,051	0 8 0	1,025 8 0
	Culponnee	...	2	86¾	0 8 0	43 6 0
	Junglewood	...	635	12,304¾	Annas 6 & 4	5,058 11 6
	Boats	...	8	...	Rs. 50 & 10	240 0 0
	Bamboos		42,753	per 100	Rs. 1½ & 3.	1,169 4 0
	Total...	...	...	...	... ...	16,539 9 0

C.

Statement showing the Timber, etc., sold in South Canara Forests, during the year 1871-72.

Name of Depôt.	Description of Timber.	No. of Logs.	Cubic feet.	Estimated rate.	Value.	Total Amount actually realized.	Difference between Columns 3 and 4.		Explanation of difference.
							Increase.	Decrease.	
1	2				3	4	5		6
South Canara Depôts.	Teakwood	18	465	Rs. A. P. 2 6 6	Rs. A. P. 1,120 10 0	Rs. A. P. 1,044 4 0	Rs. A. P.	Rs. A. P. 76 6 0	This amount was lost by sales to Bombay Gun-factory, also objected to the quality of the timber and required us to reduce our measurements.
	Blackwood	161	2,181¾	2 7 10	5,436 7 0	4,474 14 0	... ...	961 9 0	
	Wild Jack	136	1,301½	0 11 6	935 7 3	1,717 3 0	781 11 9	... ...	Amount gained by sales to Bombay Gun-factory.
	Poon Spars	61	each.	5 0 0	305 0 0	569 0 0	264 0 0	... ...	Amount gained by auction sales.
	Kiralboghie... ...	46	975	0 15 8	954 11 0	914 14 6	... ...	39 12 6	
	Matty or Banapu ...	104	1,956¾	0 11 11	1,457 6 0	1,657 10 3	200 4 3	... ...	Do. do. do.
	Tirawa	4	135	0 12 0	101 4 0	81 3 11	... ...	20 0 1	Do. do. do.
	Benteak	1	21¾	0 10 0	13 9 6	16 2 0	2 8 6	... ...	Do. do. do.
	Culponnee	2	86¾	0 10 6	56 15 0	89 3 6	32 4 6	... ...	Do. do. do.
	Junglewood	799	13,737½	0 8 4	7,152 15 2	6,519 6 7	... ...	633 8 7	Amount lost by auction sales.
	Mangowood	221	each.	3 0 0	663 0 0	711 0 0	48 0 0	... ...	Amount gained by sales.
	Boats	5	,,	70 0 0	350 0 0	400 0 0	50 0 0	... .	Do. do. do.
	Bamboos	9,618	per 100	4 8 8	417 1 0	692 12 0	275 11 0	... ...	Do. do. do.
	Total...	...	...	... ...	18,964 5 11	18,887 9 9	1,654 8 0	1,731 4 2	
	Deduct decrease ...	...	...	... ...	... ...	... ...	... ...	1,654 8 0	
	Net decrease...	...	...	... ...	... ...	... ...	... ...	76 12 2	

D.

Statement showing the Particulars of Stock in hand in the South Canara Forests at the commencement and close of the official year, and showing the extent of increase or diminution as follows:—

Description of Timber.	Number of Logs.	Cubic feet.	Average rate.	Value.	Total.
1	2		3	4	5
Balance of Stock on 31st March 1871:—			RS. A. P.	RS. A. P.	RS. A. P.
Lying in South Canara Forests. Teakwood	9	117	0 10 0	73 2 0	
Blackwood	122	1,782	0 10 0	1,113 12 0	
Ebony...	2	19	0 10 0	11 14 0	
Kiralboghee	35	each.	0 8 0	17 8 0	
Wild Jack...	149	2,865	0 6 4	1,125 14 0	
Jackwood	3	191	0 6 0	71 10 0	
Junglewood	682	11,472	0 4 0	2,868 0 0	
Boats	8	each.	1 0 0	8 0 0	
Bamboos	6,875	per 100	1 8 0	103 2 0	5,392 14 0
Lying in South Canara Market Depôts. Teakwood	17	560	2 0 0	1,120 0 0	
Blackwood	188	3,154	1 12 9	5,620 10 0	
Poon Spars	61	each.	5 0 0	305 0 0	
Wild Jack	26	1,188	0 10 0	742 8 0	
Kiralboghee	1	16	0 10 0	10 0 0	
Junglewood	948	15,998	0 8 0	8,033 0 0	
Mangowood	239	each.	3 0 0	717 0 0	
Boats	8	,,	10 10 0	85 0 0	
Bamboos	12,400	per 100	5 0 0	620 0 0	17,253 2 0
	21,773	27,362	.....	... ...	22,646 0 0
South Canara Forests. Teakwood, 1st class ...	6	192¼	0 10 0	120 7 6	
Do. 2nd ,, ...	5	each.	0 4 0	1 4 0	
Blackwood	145	2,016	0 10 0	1,260 0 0	
Poon Spars	5	each.	50 0 0	250 0 0	
Wild Jack	97	5,633½	0 8 0	2,816 12 0	
Jackwood	3	191	0 8 0	95 8 0	
Ebony	2	19	0 10 0	11 14 0	
Matty or Banapu	20	896¼	0 8 0	448 4 0	
Junglewood, 1st class ...	413	7,895¼	0 6 0	2,960 11 6	
Do. 2nd ,, ...	624	10,438	0 4 0	2,609 8 0	
Boats, 1st class	4	each.	10 0 0	40 0 0	
Do. 2nd ,, ...	8	,,	1 0 0	8 0 0	
Bamboos...	7,152	per 100	1 8 0	107 4 5	
South Canara Depôts. Teakwood	2	119½	1 0 0	119 8 0	
Blackwood	80	2,088¼	0 12 0	1,566 3 0	
Ebony	44	200	0 12 0	150 0 0	
Poon Spars	53	each.	50 0 0	2,650 0 0	
Wild Jack	5	410	0 12 0	307 8 0	
Jackwood	2	52½	0 12 0	39 6 0	
Matty or Banapu	155	2,968¾	0 12 0	2,226 9 0	
Tirawa	11	170	0 12 0	127 8 0	
Junglewood, 1st class ...	217	2,200	0 10 0	1,650 9 6	
Do 2nd ,, ...	295	4,710¾	0 8 0	2,355 6 0	
Mangowood	18	each.	3 0 0	54 0 0	
Boats	7	,,	5 0 0	35 0 0	
Bamboos, 1st class... ...	16,400	per 100	6 0 0	984 0 0	
Do. 2nd ,, ...	28,858	,,	5 0 0	1,442 15 0	
Ben Teak	...	2,029¼	0 10 0	1,268 4 6	25,706 6 5
Total...	...	...	...	...	48,352 6 5

Statement showing the Particulars of Stock in hand, etc.—(Concluded.)

	Rs. A. P.	Rs. A. P.
Add total valuation of timber felled during the year as per Statement B, Column 7	16,539 9 0	
Add enhancement in value of stock by removals to market depôts	5,485 3 4	22,024 12 4
Grand Total...		70,377 2 9
Deduct total valuation of timber, etc., sold during the year, as per Statement C. (Column 3)		18,964 5 11
		51,412 12 10
Compare remainder with total under Column 5...		48,352 6 5
Increase in Stock...		3,060 6 5

E.

Statement showing the Timber, etc., disposed of under the License and Voucher system, in South Canara Forests, during the official year 1871-72.

Description of Timber or Forest-produce.	Number of Cubic feet.	Average rate.	Amount.	Total.
1	2	3	4	5
		Rs. A. P.	Rs. A. P.	Rs. A. P.
Reserved Timber	1,169	0 7 6	551 0 7	
Junglewood	1,286	0 5 2	402 11 8	
Bamboos (1,24,450, at Rs. 15 per 1,000)	...	... ...	1,866 12 0	
Palmyras (9 at Rs. 2 each)	...	... ...	18 0 0	
Charcoal (100 Moorahs at Rs. 5 per 100)	...	... ...	5 0 0	
Firewood for Sandalwood Stills (175,134 head-loads at 9 pies per head-load.)	...	... ...	8,209 6 6	
Total...	...	... ...	... ...	11,052 14 9

CAMP MANGALORE,
1st *June* 1872.

(Signed) W. CARROLL,
Overseer in charge of Dy. Conservator's Office, South Canara.

ORDER THEREON, 27th October 1873, No. 1,194.

	Rs.
Receipts.	
Sale of timber from depôts ...	1,16,187
Sale of timber, etc., from forests ...	1,73,725
Value of timber supplied to Department Public Works, etc... ...	84,317
Permit fees, rent of jungles, etc.	35,281
Sale of minor forest-produce ...	4,659
Sale of confiscated drift and waif timber	2,877
Fines and forfeitures	103
Miscellaneous	1,734
	4,18,883
Expenditure.	
Felling operations	93,311
Purchase and keep of elephants, cattle, etc...	22,631
Rent, etc., of leased forests ...	9,177
Plantations	49,936
Communications	14,516
Miscellaneous forest expenditure ...	5,243
	1,94,814
Establishment.	
Salaries	1,23,402
Travelling allowance	19,125
Contingencies	8,376
	3,45,717

THE receipts for the year under review amounted to Rs. 4,18,883, and the expenditure to Rs. 3,45,717, as marginally noted. The excess of revenue over expenditure was thus Rs. 73,166, and, if to this be added the net increase in the value of the stock in hand, which is estimated at Rs. 4,960, the clear gain derived from the year's operations amounts to Rs. 78,126,—a result which is satisfactory if it has been clearly borne in mind in all ranges that the Government are anxious that conservancy should not suffer from an undue importance being attached to financial results.

2. The subjoined table is an abstract of the felling operations in the districts in which the Forest Department was at work in the year 1871-72, as shown in paragraph 85 of the (late) Conservator's report:—

		Departmentally.	On License.	Free.	Total.
Timber...	(cubic feet)	90,169	4,05,655	1,30,996	6,26,820
Firewood	(tons)	.....	18,905	663	19,568
Railway fuel	(do.)	26,803	.....	.....	26,803
Charcoal	(do.)	.....	.....	.....	2,376
Bamboos	(cart-loads)	.....	28,985	4,136	33,121
Brushwood	(do.)	.....	.....	.....	241
Sandalwood	(maunds)	14,528	.....	.....	14,528
Red Sanders	(lbs.)	7,85,925	.....	.....	7,85,925

3. The Government observe that, in the statement from which the above was taken, no felling operations are shown in the Nellumboor plantations, although timber-saplings and bamboos, to the value of Rs. 17,928, appear in Statement B, received from that range, as felled during the year under review. From Canara also Statement B, shows fifty-eight poon-spars, valued at Rs. 2,900, which are not entered in the Conservator's statement; while, on the other hand, the timber, shown by the Conservator as felled departmentally in the Annamallai forests, is more than double the amount entered in the range accounts. No bamboos are shown as felled departmentally in the Head Office statement, yet floating operations could hardly have been carried on without them, and, on reference to the returns from the ranges, 42,753 bamboos are found to have been felled in Canara, at rates ranging from Rs. 1½ to Rs. 3, while 9,130 are entered in the Nellumboor Statement B. The firewood taken from the Canara forests for Sandalwood stills also appear only in the range accounts, although the amount felled was 1,75,134 head-loads. No reference is made in the report to these discrepancies between the local and Head Office accounts. The particular attention of the Inspector of Forests will be directed to the subject.

4. A detailed abstract of the financial statement given in the Conservator's report is subjoined, with columns added to show the percentage of profit or loss on departmental working.

Range.	Departmental Sales.	License and Voucher, etc.	Miscellaneous.	Total Receipts.	Expenses of departmental Working.	Plantation, Conservancy, Purchase of Live-stock and Permanent Improvements.	Conservancy Establishment.
1	2	3	4	5	6	7	8
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1. Gumsoor	614	3,660	36	4,310	461	36	672
2. Kurnool	678	31,745	1,171	33,594	326	360	3,054
3. Cuddapah and Bellary ...	16,807	38,480	543	55,330	2,085	12,748	3,867
4. North Arcot	3,219	12,875	348	16,442	1,947	7,150	2,845
5. Salem	10,610	49,425	15,468	75,503	4,280	2,634	6,411
6 South Arcot	1,711	3,034	76	4,821	1,408	839	1,000
7. Madura	4,304	10,024	330	14,658	3,681	1,488	2,598
8. Tinnevelly	5,048	9,992	4,048	19,088	10,931	2,108	3,847
9. Trichinopoly	.....	.....	.....	.....	.....	6,800	2,832
10. Mudumallai	21,300	27	201	21,528	23,656	5,258	396
11. Annamallai	54,009	2,447	361	56,817	23,403	5,049	2,361
12. Bolumputty	4,258	3,380	.....	7,638	1,933	5,039	2,227
13. Seegoor	19,161	1,155	1,511	21,827	6,605	1,934	.....
14. Bhowany	12,780	2,667	956	16,403	14,099	5,619	.....
15. Collegal	16,500	544	975	18,019	6,959	3,889	.....
16. Mettapolliem	.....	214	.....	214	93	.....	.....
17. Wynaad	1,829	8	.....	1,837	5,384	101	1,119
18. Nellumbur	8,389	120	.....	8,509	11,322	8,704	2,897
19. South Canara	18,888	3,682	18,619	41,189	12,727	1,409	3,153
20. Golgondah	.....	246	10	256	.....	.....	757
21. Central Office	.....	.....	.....	.....	.....	.....	.....
	2,00,505	1,73,725	44,653	4,18,883	1,31,800	71,250	40,036
Add value of permanent improvements (column 7) ...	.....	.....	.....	.....	.....	.....	.....
Gain from years' operations ...	.....	.....	.....	.....	....	.....	.....
Percentage of the above to expenditure	.....	.....	.....	.....	.....	.....	.....

N.B.—Column 13 includes increase and decrease from re-valuation as well as from additions to stock and sales.

Column 15 is percentage resulting from column 2 + column 13, compared with column 6.

To obtain column 16; $\frac{\text{Cost of Supervision chargeable to departmental Working}}{\text{Total Cost of Supervision.}} = \frac{\text{Expenses of depart.}}{\text{Total expenditure, Ex.}}$

Column 17 is the percentage resulting from column 2 + column 13, compared with column 6 + column 16.

Miscellaneous.	General Establishment or supervision.	Total Expenditure.	Difference between Expenditure and Revenue.	Increase or Decrease in Stock.	Net Profit or Loss.	Results of Departmental felling operations excluding cost of supervision.	Share of Column 10 debitable to Departmental Working.	Results of departmental felling Operations including Cost of Supervision.
9	10	11	12	13	14	15	16	17
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
.....	1,969	3,138	+ 1,172	— 310	+ 862	— 34·06	776	— 75·42
.....	3,571	7,311	+ 26,283	— 531	+ 25,752	— 54·90	311	— 76·92
.....	3,885	22,585	+ 32,745	—13,624	+ 19,121	+ 28·68	433	+ 6·55
.....	3,400	15,342	+ 1,100	+ 2,055	+ 3,155	+ 170·88	554	+ 110·87
168	3,829	17,322	+ 58,181	+ 79	+ 58,260	+ 149·74	1,214	+ 94·56
16	2,532	5,795	— 974	+ 791	— 183	+ 77·69	1,092	+ ·08
9	4,189	11,960	+ 2,698	+ 1,024	+ 3,722	+ 44·74	1,985	— 5·96
1,701	5,994	24,576	— 4,588	+ 11,209	+ 6,621	+ 56·95	3,526	+ 18·67
.....	.....	9,132	— 9,132	.....	— 9,132	.....	.....	.....
.....	15,216	44,521	— 22,993	— 5,201	— 28,194	— 31·95	12,283	— 55·20
.....	6,727	38,140	+ 18,677	— 84	+ 18,593	+ 180·42	5,012	+ 89·77
.....	552	9,751	— 2,113	+ 100	— 2,013	+ 125·45	116	+ 112·69
.....	380	8,919	+ 12,908	— 5,229	+ 7,679	+ 110·93	294	+ 101·94
.....	873	20,591	— 4,188	+ 7,732	+ 3,544	+ 45·48	624	+ 39·32
.....	426	11,274	+ 6,745	— 1,301	+ 5,444	+ 118·40	273	+ 110·16
48	5	146	+ 68	.....	+ 68	— 100·00	3	— 100·00
.....	3,915	10,519	— 8,682	— 3,326	— 12,008	— 127·80	3,192	— 117·45
.....	4,615	27,538	— 19,029	+ 8,516	— 10,513	+ 49·31	2,279	+ 24·92
82	8,741	26,112	+ 15,077	+ 3,060	+ 18,137	+ 72·45	6,404	+ 14·72
.....	.....	757	— 501	.....	— 501	.....	.....	.....
.....	30,288	30,288	— 30,288	.....	— 30,288	.....	.....	.....
2,024	1,01,107	3,45 ,717	+ 73,166	+ 4,960	+ 78,126	+ 56·48	54,271	+ 10·72
.....	.....	.....	.....	.....	71,250	.....	.....	.....
.....	.....	.....	.....	.....	1,49,376	.....	.....	.....
.....	.....	.....	.....	.....	43·27	.....	.....	.....

$$\frac{\text{mental Working.}}{\text{eluding Supervision}} \text{ or } \frac{\text{Column 16}}{\text{Column 10}} = \frac{\text{Column 6.}}{\text{Column 6 + column 7 + column 8 + column 9.}}$$

5. From the above, it is seen that the sale of timber, etc., felled departmentally, with the increase in stock at the end of the year, resulted in a profit of 56·48 per cent. on the working expenses, including special petty establishment, but excluding general superintendence charges. It is difficult to divide these latter into working, planting, conservancy, and miscellaneous charges; but it may fairly be assumed that the departmental working of the forests may be debited with a share of the supervision charges, bearing the same ratio to the total supervision charges as the felling and depôt expenditure bears to the other forest expenditure. Columns 16 and 17 of the abstract have been prepared on this principle, and the result shows that, for the whole Presidency, the profit from departmental working amounts to 10·72 per cent. of the expenditure, including a share of the cost of general supervision. This is certainly not a very high rate of profit, but there is no doubt that *very* much more departmental felling can be carried out, without largely increasing the superior establishment, in which case the profits would be proportionately larger.

6. In the five ranges marginally noted, the mere felling, transport, and special petty establishment charges have exceeded the amounts realized by departmental working, and in Madura, where the profit on the mere working is considerable, a deficit is found when the cost of supervision is also looked to. In the case of the Mettapolliem and Wynaad ranges (and to a certain extent in Mudumallai also), a satisfactory reason exists for the apparently heavy percentage of loss which will be remarked on more fully when dealing with the ranges individually. It is to be noted that in some districts departmental working appears to be a failure through merchants being able to obtain timber on the license and voucher system on such terms as to be able to under-sell the department. This is an avoidable cause of loss, which should not be permitted to occur. The Government have always been disposed to regard favourably the extension of departmental felling, as being the system most conducive to an efficient conservancy; but a consideration of its results in the year under review leads them to the conclusion that it must be undertaken with great caution, and cannot be universally applied.

Gumsoor, Kurnool, Mudumallai, Mettapolliem, and Wynaad.

7. It appears to them that real forest, containing valuable timber trees, should invariably be worked departmentally, and ordinary jungles generally on the license voucher system. In the latter case, the precaution of marking the trees to be cut, or, where general felling takes place, indicating those to be reserved, must be taken, as it is to the neglect of such precautions that most of the evils attending the system appear attributable.

8. The character of what are, for convenience' sake, generally called "forests" varies so greatly that the Government cannot do more than enunciate the general principle. Its application they must leave to their officers, and would invite the particular attention of the Board of Revenue and the Inspector of Forests to the foregoing remarks. From the statement accompanying the present report, the Government are unable to gather accurate information as to the aggregate acreage and financial position of the fuel reserves and plantations in the Presidency. A

statement in the following form should, in future, accompany the report from each district.

Name of Plantation or Reserve.	Date of Establishment.	Extent.	Expenditure up to Date.	Expenditure during year.	Receipts.	Remarks.
1						
2						
3						
4						

9. *Gumsoor and Suradah (Ganjam).*—The receipts of this range amounted to Rs. 4,310, and the expenditure to Rs. 3,138. There was a decrease of stock to the extent of Rs. 310, and, adding this to the expenditure, the net surplus of the year amounts to Rs. 862, against Rs. 2,749 last year. The small financial results are said to be owing, to a great extent, to want of water for rafting, preventing applications for licenses; but the Government observe that 36,590 cubic feet of Sâl were removed on the license and voucher system during the year. For this Rs. 2,786 were realized, being about one Anna three Pies per cubic foot. The average price realized at the depôt sales was three Annas eleven Pies. The mere departmental working in this range was carried on at a loss of 34·06 per cent. on the working expenditure, which leads to the presumption that the department is under-sold by the merchants obtaining timber on seigniorage. The particular attention of the Collector is called to this point as well as to Mr. McCally's remarks on the destruction of Myrabolane trees, and the needless drain on the forests resulting from the annual fires among the Ooriahs in Gumsoor. An enhancement of seigniorage rates for merchants need not affect the prices charged to ryots desirous of using the timber on the spot.

10. *Kurnool.*—This range was under the charge of several officers during the year under review. The Assistant Conservator, whose report is submitted, joined the range towards the close of the year only.

11. The net surplus of the year amounted to Rs. 25,752, the receipts having been as high as Rs. 33,594, against an expenditure of Rs. 7,311. The sum of Rupees 27,542 appears in Statement E as realized by seigniorage on wood, and, from the body of the report, it appears that this amount was levied on 13,808 bandy-loads of timber; the average rate being thus rather under Rs. 2 per bandy-load, against Rs. 2-8-0 realized last year. With Colonel Morgan's explanation that no bamboos were used in floating, the Government are not astonished to learn that the wood sank to the bottom of the canal, and that, under the circumstances, the Assistant Conservator arrived at the conclusion that carting was cheaper.

12. *Cuddapah.*—The receipts of the Cuddapah range, according to the Conservator's accounts, amounted to Rs. 55,330, and the expenditure to Rs. 22,585; but, as the decrease in the value of stock was Rs. 13,624, the year's profits only

amounted to Rs. 19,121, against Rs. 29,087 last year, and Rs. 36,303 in 1869-70. The falling off in the financial results is, however, chiefly owing to the decrease in the stock in hand, and is not to be regretted, as timber kept too long in depôt only deteriorates. In this range, a quantity of timber valued at Rs. 970 when stored was sold off by auction this year for Rs. 177. The Collector is requested to explain the delay in handing over those of the railway fuel reserves referred to in the Assistant Conservator's report. The arrangement by which the Railway Company paid one rupee to the department for every 1,000 lbs. of fuel supplied by the contractor appears to have worked satisfactorily, but it is doubtful whether this plan will answer equally well when the contractor is working the Shrotriyamdar's jungles at the same time as the Government reserves; and the attention of the Collector is drawn to Colonel Morgan's remarks that probably departmental working may be found the best way of supplying railway fuel.

13. The fuel plantations seem to be progressing favourably, but the Government incline to agree with Colonel Morgan in thinking that reserves rather than plantations must be looked to for the supply of railway fuel. They do not, however, undervalue the benefits to be expected from plantations, and are glad to observe that Mr. Yarde has devoted so much care to their development. The operations in the Cuddapah Range during the year under review appear to have been satisfactory, notwithstanding the difficulties arising from the grazing rights of the villagers.

14. *North Arcot.*—A very satisfactory report on this range is submitted by Mr. Sheffield, the Assistant Conservator in charge. The receipts amounted to Rs. 16,442, and the expenditure to Rs. 15,342, leaving a balance in favour of the department of Rs. 1,100, which, with an increase of Rs. 2,055 in the value of the stock in hand, brings up the year's profits to Rs. 3,155. This is certainly less than was realized last year; but the forests have gained by the substitution of departmental felling for the license and voucher system in respect of all but timber fit only for firewood, and by an increased expenditure of Rs. 2,522 on plantations which promise to be very successful in this district. They are six in number, aggregating 968 acres in extent. Though some of them are only partially planted up, they contained, at the end of the year, 1,43,500 established Casuarina plants, many of which seem to have grown with astonishing rapidity. The Government note Colonel Morgan's opinion that the tree may be found to sell well for building timber. Of the two fuel reserves referred to in G. O., dated 30th May 1871, No. 954, that at Manandur, measuring nearly four square miles, has been enclosed; but the Assistant Conservator reports that further operations at Amboor were stopped by the Collector after the demarcation and survey had been nearly completed. An early report is requested as to the circumstances which led to the Collector's interference at so late a period. It is to be hoped that a satisfactory settlement of all difficulties has been arrived at by this time. The financial results of the commencement made in departmental felling appear to have been particularly satisfactory. Rs. 3,218 were realized by sales from the depôt, while the whole amount thus sold was replaced and additional timber, to the value of Rs. 2,054, brought to the depôt at an expenditure of Rs. 1,922. The attention of the

Collector is drawn to Mr. Sheffield's remarks on the character of his peons. If they are incompetent, they should be got rid of.

15. *Salem.*—The receipts for the year amounted to Rs. 75,503, and the expenditure, less increase in stock, to Rs. 17,243, so that the year's profits amounted to Rs. 58,260. The profits are very high, far in excess of those realized in any other range; but the Government regret that they are, to some extent, the result of keeping the expenditure on plantations so low as to lead to a partial failure of operations. The attempts made to improve the railway fuel reserves by broad-cast planting appear also to have been far from successful, but the Government note that Colonel Morgan is of opinion that the system should be persevered in. Much good will doubtless result from fencing in the reserves as contemplated, and the revenue yearly accruing from this source will amply justify a great increase in the expenditure under this head, so as to render the supply permanent. Some more detailed information should be afforded, with reference to the removal of 25,790 cubic feet of timber from the Denkincottah forest under free passes. Possibly a portion of this might have been more correctly classed as firewood. The attention of the Collector is called to to Mr. Brougham's proposal in paragraph 36, with reference to farming out firewood and bamboo jungles. It must be borne in mind that the interests of the contractor are antagonistic both to the interests of Government and of the ryots, and the system, if introduced, must be worked with great caution. The Government desire to be furnished with full particulars of the system as now followed.

16. *South Arcot.*—In this range, the year's receipts amounted to Rs. 4,821, and the expenditure to Rs. 5,795, or Rs. 974 in excess of the receipts. But as there was an addition of Rs. 791 to the value of the stock, the deficit only amounted to Rs. 183. The most important forest-work in this range for the present is in connection with the local and railway fuel reserves. Four of the former, aggregating about 18,000, have been under general supervision by the forest establishment during the year, and in the case of three of them the boundaries have been settled and village rights investigated. The Government desire to be furnished with a copy of the proposed rules defining these rights. The operation at the Ginjee fuel reserves appear to have been fairly successful. The attention of the Collector is called to Mr. Woolridge's remarks on the advantage of having the Forest headquarters fixed at Tindevanum, and to his suggestions for the establishment of fuel reserves at Gungavaram and Mullatur.

17. *Madura.*—The receipts for the year, *plus* increase in stock, amounted to Rs. 15,682, and the expenditure to Rs. 11,960, leaving the department a gainer of Rs. 3,722. The plantations are small, but they appear to be progressing fairly. Extraordinarily rapid growth is reported of some of the trees in No. III., and the Government approve of Colonel Morgan's recommendation that this plantation should be extended, on the understanding that it is first ascertained that the soil in the neighbourhood is similar to that on which the trees reported on have been planted. Two forests are worked departmentally by means of contractors who merely undertake to fell and deliver trees selected by the officers of the department. This system does not seem to leave much in the hands of the contractors. This

year, as last, no timber was supplied to the Public Works Department. It is hoped that G. O., dated 22nd June 1872, No. 969, will have the effect of producing a change in this respect. The attention of the Collector is called to Colonel Morgan and Mr. Williams's remarks about the establishment of central depôts and periodical auction sales.

18. *Trichinopoly and Tanjore.*—In this range, the work is confined to plantations and fuel reserves, and, as these are now in their infancy, the expenditure is somewhat heavy without any financial return for the present. The expenditure, as shown in the Conservator's accounts, amounted to Rs. 9,131 composed of Rs. 6,300, working charges, and Rs. 2,832 for establishment. A sum of Rs. 106 is mentioned by Mr. Williams as having been realized by the sale of brushwood, but it does not appear in the Conservator's statement. The plantations in the Trichinopoly District are five in number, the largest being 100 acres in extent, 69 of which have been cleared. There are three fuel reserves, two of which have been fenced in. The plantations and fuel reserves are both progressing satisfactorily, and the latter, from their close proximity to the railway, promise to be particularly useful. The Negapatam plantation in the Tanjore District has been a failure hitherto, but farther inquiries are to be made as to the cause of the want of success before its abandonment is finally determined on. The expenditure mentioned by Mr. Williams as having been incurred on this plantation finds no place in the Conservator's statement.

19. *Tinnevelly.*—During the absence of Captain Walker, this range has been under the charge of Mr. Hayne. The receipts for the year amounted to Rs. 19,988, and the charges to Rs. 24,576; but, as the increase in stock is estimated at Rs. 11,209, the year closed with a financial gain of Rupees 6,621. From Colonel Morgan's remarks, however, there seems reason to believe that the stock in hand may have been valued rather too highly. The Government observe that the license and voucher system has been abolished throughout the range, and trust that a little experience will lead to a still farther reduction in the charges incurred this year for departmental working, the sales and increase in stock, amounting to Rs. 17,157 against a charge of Rupees 11,911 for felling and transfer to depôt. The second reason assigned by Mr. Hayne for the small demand during the year is satisfactory, but, with reference to his remark that his rates were somewhat high, the Government would observe that, when the Forest Department undertakes the supply of the general market, the rates must, under ordinary circumstances, be, as far as possible, adapted to the demand either by the system of periodical auctions or otherwise.

20. The planting of cardamoms seems hardly to form a legitimate part of forest-work, but there is no objection to a trial being made as an experiment. The Government regret that the expenditure on plantations has been attended with such poor results. A special report is requested with reference to the utilization of tank-beds for this purpose.

21. *Singumpatti Zemindari.*—The forests of this Zemindari, the proprietor of which is a minor, are under the officer in charge of the Tinnevelly range. The receipt for the year amounted to Rs. 8,666, and the expenditure to Rs. 1,788, which, with the decrease in stock to the extent of Rs. 2,122, leaves the year's profits at Rs. 4,756. Mr. Williams reports that the auction sales resulted in a loss to the *State*,

which the Government presume is a clerical error for *estate*. Colonel Morgan, however, is of opinion that the stock on hand had been valued too high.

22. *Annamallai*.—This range is under the charge of Mr. Douglas, who has submitted a very interesting and, on the whole, a very satisfactory account of the year's operations. The receipts for the year amounted to Rs. 56,817, and the expenditure to Rs. 38,140. Making allowance for decrease in stock to the extent of Rs. 84, the net profits of the year amount to Rs. 18,593. Colonel Morgan remarks of the financial results: " These are satisfactory. A profit of Rs. 18,663 (apparently a clerical error for Rs. 18,593) is shown with timber to the value of Rs. 40,000 sold, but not paid for." He appears, however, to have overlooked the fact that the year's receipts include a sum of Rs. 46,462 for timber sold last year, so that, if the adjustments had been made within the respective years, the net profit would only have been Rs. 12,131 instead of Rs. 18,593. This, however, is far from an unsatisfactory result; the more especially as the license and voucher system hardly exists in the range, and the expenditure on conservancy, planting, and permanent improvements has been considerable. The Government would be glad to see this latter increased, but would rather provide for it by an increased allotment in the budget than by the assignment of a special item of revenue as suggested by Mr. Douglas. The attention of the Inspector of Forests is called to the difference of opinion between Mr. Douglas and Colonel Morgan as to the system on which plantations should be conducted.

23. The recent changes in the organization of the department will probably do away with many of the difficulties which stood in the way of the utilization of the hill-tribes in the collection of forest-produce, and the Government request a report from the Collector with reference to Mr. Douglas's proposals for obtaining the services of the Khaders.

24. *Bolumputty*.—This range also is under Mr. Douglas's charge, and seems to have been carefully looked after during the year. The heavy expenditure on plantations and conservancy caused a deficit of Rs. 2,013, but the financial result of the departmental felling operations was very satisfactory, and it is to be regretted that Mr. Douglas did not apply for funds to enable him to carry out the contract for railway sleepers. Application for funds in excess of the budget allotments should always be made when it is demonstrable that the proposed outlay will bring in an immediate profit. The fuel reserves and plantations in this range appear to be progressing satisfactorily, and the consent of the Government of India has now been obtained to the purchase of land for an extension of the Walliar reserves. The Government agree with Mr. Douglas that the re-covering of the hill-slopes may probably be brought about by the restriction of kumari and the natural restoration of the jungles in the course of fifteen or twenty years.

25. *Mudumalai, Seegoor, Bhowany, Mettapolliem, and Collegal*.—These ranges are all under the charge of Colonel Morgan. In the first, the result of departmental operations was a loss of 55·20 per cent. on the expenditure, but it has to be borne in mind that in the accounts the whole of Colonel Morgan's salary is charged to that range alone. Still there remains a deficit of 31·95 per cent. on the working expenditure, which the Government cannot say is altogether satisfactorily explained by the unfavourable circumstances under which it was found necessary to hold an

auction at Mysore. The stock in hand, however, is very large, and it is possible that the valuation does not favourably represent its value, as the prices realized on the sales of this year appear, by Statement C, to have exceeded the valuation by 43·26 per cent. The cost of carriage of timber (exclusive of the feed of cattle partially employed for the purpose) is shown as Rs. 13,102 in Statement A, while the increased value of the timber thus brought to depôt is put down at Rs. 10,305 only in statement D. The Government desire to have this point explained. The teak plantation at Benni seems to be progressing very satisfactorily, and progress has also been made with the Sandalwood plantations at Seegoor, Sattiamangalam, and Vyloor. The financial result of the departmental operations was very satisfactory at Collegal, and more than fairly so at Bhowany. In all the ranges under Colonel Morgan's charge, the aggregate gain on departmental operations was 2·36 per cent. The Government observe that it is reported that the Sandalwood at Collegal is being gradually worked out, and they trust that the planting operations are sufficiently extensive to fulfil Colonel Morgan's anticipations that they will more than suffice for the re-placement of the natural Sandal. It is satisfactory to observe that a better market is expected next year for railway fuel at Bhowany.

26. *Wynaad.*—This range is now under the charge of Mr. Peet, who joined it only about three weeks before the end of the year. None of the forests are worked on the license and voucher system, operations being confined to departmental felling with a little planting and conservancy. The financial result of the year's departmental working appears to have been a loss of 117·45 per cent. on the expenditure; but this was almost entirely owing to a reduction of Rs. 8,446 made by Mr. Peet in the valuation of the stock in hand at the end of last year, which had been very highly valued, under the impression that a great demand would be created by the proposed railway to Mysore. A sum of Rs. 1,401 was also struck off for timber not forthcoming when Mr. Peet joined the range. Leaving these out of account, however, the result of the year's felling operations, including cost of supervision, was a deficit of 2·64 per cent., almost nothing having been done in the way of planting or other conservancy operations.

27. The Government fully concur with Colonel Morgan and Mr. Peet as to the advantages which would arise from obtaining a lease of the Palpilli forest, but all attempts at negotiation have hitherto been unsuccessful. Sanction will be readily accorded to any proposals which seem likely to lead to a satisfactory arrangement with the managers of the temple.

28. *Nellumber.*—Mr. Ferguson has submitted a concise and, in many ways, satisfactory report on the state of the Conolly plantation. A financial profit is not expected for several years to come, but the net deficit was only Rs. 10,513 against Rs. 13,001 last year, while the planting, weeding, and pruning operations seem all to have been thoroughly carried on. Felling operations were necessarily somewhat limited, but resulted in a fair profit on the working expenditure, which would probably have been larger but for Mr. Ferguson's sickness and frequent change of Overseers. The number of teak seedlings planted out this year was considerably less than last year, but there is an increase in the acreage planted, weeded, and pruned, and the nurseries are said to be abundantly planted with seedlings ready to be planted out as soon as the season opens.

29. *South Canara.*—A short report on this range has been submitted by Mr. Carroll, the Overseer in charge, during Mr. Cherry's absence. There was a great increase in the net profit, which amounted to Rs. 18,137 against Rs. 8,192 last year, and it is satisfactory to observe that this result has been brought about by increased departmental operations and not by an extension of the license and voucher system or decrease in the expenditure on plantations and conservancy. In the Casergode Taluq carting has been substituted for floating, pending the blasting of the rocks in the Puiswani. No mention is made of the cost which is likely to be incurred to make the river passable, and the Government think it desirable that the opinion of the District Engineer should be obtained before the operation is commenced. The spit of sand between the backwater and the sea at Mangalore does not seem to Government an eligible site for a forest depôt, and the Collector is requested to report what amount would be required for the purchase of a suitable piece of ground in a favourable locality, in the event of no Government land being available. The expenditure on planting in this range was inconsiderable during the year under review, and the Government would be glad to see increased efforts in this direction throughout the district generally.

30. The Government, in their review of the Conservator's report for 1870-71, ordered (paragraph 28) the gradual preparation of a forest map, which is much needed, and they desire to be informed what steps have been taken in the matter. A map of the nature directed should accompany each annual report on the forests, and some copies should also be printed separately.

(True Extract.)

(Signed) R. A. DALYELL,
Acting Secretary to Government.